West Virginia University

MORGANTOWN, W. VA.

CATALOGUE

1899-1900.

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CONTENTS.

	Page.
Calendar	7
Board of Regents	9
Officers of Instruction:	
The Faculty	10
Special Instructors and Lecturers, Summer Quarter, 1900	18
Staff of the Preparatory School at Montgomery	19
Library Staff	19
Agricultural Experiment Station Staff	19
Other Officers	19
Organization	20
Origin and Location	20
Funds	21
Buildings	21
Equipment	23
Gymnasium	25
Athletics	26
Societies	26
Theses	27
Prizes	28
Fellowships	35
Discipline	36
Synoptic Lectures	36
Special Lectures	37
Chapel Exercises	37
Church Halls	37
Episcopal Hall	37
Special Courses for Candidates for the Ministry	38
University Fees	39
Board and Lodging	39
Estimated Expenses for a Year of Nine Months	39
Approved Boarding and Rooming Places	40
Accredited Preparatory Schools	40
Matriculation and Registration	41
The University Library and Reading Room	42

Page.
The College of Arts and Sciences 44
Departments of Instruction:
Philosophy 53
Pedagogy 55
Sociology 57
Economics 58
Political Science 60
Law 61
History 62
Greek Language and Literature 64
Latin Language and Literature 65
Romance Languages and Literatures 67
Germanic Languages and Literatures 70
English Language and Literature 72
Rhetoric and Elocution 74
Mathematics 77
Astronomy 78
Physics 78
Chemistry 80
Geology and Mineralogy 82
Zoölogy 83
Anatomy 87
Histology, Pathology, Bacteriology and Materia Medica 88
Botany 90
Medicine 92
Pharmacy 98
Domestic Science 102
The College of Engineering and Mechanic Arts 109
Departments of Instruction:
Civil and Mining Engineering 128
Mechanical Engineering and the Mechanic Arts 131
Mechanics and Applied Mathematics 137
The College of Agriculture 140
Departments of Instruction:
Agriculture 147
Horticulture and Forestry 149
Veterinary Science 150
Economic Entomology 151
Economic Botany 151
Agricultural Chemistry 151
Agricultural Home Reading Course 152
The West Virginia Agricultural Experiment Station 155
The College of Law 157
The School of Music 167

Page.
The Commercial School..... 175
The Preparatory Schools:
The Morgantown Preparatory School..... 182
The Montgomery Preparatory School..... 192
The Military Department..... 193
The Department of Physical Training..... 195
The Department of Correspondence Instruction..... 197
Catalogue of Students..... 206
Degrees Conferred in 1899..... 248

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CALENDAR.

1900.

May 30, Wednesday.....Memorial Day; a holiday.
June 14, Thursday, 8 P. M.....
Joint Debate between Representatives of the Columbian and the Parthenon Literary Societies.
June 15, Friday, 8 P. M.....Moot-Court.
June 16, Saturday, 8 P. M.....Regents' Prize Declamation Contest.
June 17, Sunday, 10:45 A. M.....Baccalaureate Sermon.
June 18, Monday, 1:30-5:00 P. M.....
Annual Exhibition of the Department of Drawing and Painting.
June 18, Monday, 8 P. M.....Scott Prize Declamation Contest.
June 19, Tuesday, 9:00-1200 A. M., and 2:00-5:00 P. M.....
Annual Exhibition of the Department of Drawing and Painting.
June 19, Tuesday, 10 A. M.....
.....Commencement Recital of the School of Music.
June 19, Tuesday, 2 P. M.....Competitive Drill.
June 19, Tuesday, 8 P. M.....Inter-Society Contest.
June 20, Wednesday, 10 A. M.....
.....Company Competition for Corps Colors.
June 20, Wednesday, 2 P. M.....Field Day.
June 20, Wednesday, 8 P. M.....Wiles Prize Oratorical Contest.
June 21, Thursday, 10 A. M.....
Commencement Exercises. Address by Dr. John Fiske, of Cambridge, Mass.; subject, "Old and New Ways of Treating History."
June 21, Thursday, 2 P. M.....Alumni business meeting.
June 21, Thursday, 8 P. M.....
Illustrated Lecture, by Mr. Robarts Harper, of London, England; subject, "Masterpieces of Architecture."
June 21, Thursday, 9:15 P. M.....
.....Commencement Reception in the Gymnasium.
June 22, Friday.....Recitations of Summer Quarter begin.
July 4, Wednesday.....Independence Day; a holiday.
August 29, Wednesday.....Last Recitations of Summer Quarter.
August 30, Thursday, to Saturday, September 1, inclusive....
.....Final Examinations of Summer Quarter.

September 1, Saturday.....Summer Quarter ends.
September 17, Monday.....Fall Quarter begins.
September 17, 18 and 19, Monday, Tuesday and Wednesday..
.....Entrance Examinations.
September 18 and 19, Tuesday and Wednesday.....
.....Matriculation and Registration of Students.
September 19, Wednesday, 7:30 P. M.....Quarterly Convocation.
September 20, Thursday.....Recitations of Fall Quarter begin.
November 29, Thursday, to December 1, Saturday, inclusive..
.....Thanksgiving Recess.
December 12, Wednesday.....Last Recitations of Fall Quarter.
December 13, Thursday, to December 15, Saturday, inclusive,
.....Final Examinations of Fall Quarter.
December 15, Saturday.....Fall Quarter ends.
December 16, Sunday, to January 1, 1901, Tuesday, inclusive,
.....Quarterly Recess.

1901.

January 2, Wednesday.....Winter Quarter begins.
January 2, Wednesday, 7:30 P. M.....Quarterly Convocation.
January 3, Thursday.....First Recitations of Winter Quarter.
February 22, Friday.....Washington's Birthday; a holiday.
March 19, Wednesday.....Last Recitations of Winter Quarter.
March 20, Thursday, to March 23, Saturday, inclusive.....
.....Final Winter Quarter Examinations.
March 23, Saturday.....Winter Quarter ends.
March 24, Sunday, to March 31, Sunday.....Quarterly Recess.
April 1, Monday.....Spring Quarter begins.
April 1, Monday, 7:30 P. M.....Quarterly Convocation.
April 2, Tuesday.....Recitations of Spring Quarter begin.
May 30, Thursday.....Memorial Day; a holiday.
June 12, Wednesday.....Last Recitations of Spring Quarter.
June 13, Thursday, to June 15, Saturday.....
.....Final Examinations of Spring Quarter.
June 20, Thursday.....Commencement.

BOARD OF REGENTS.

For the Term ending June 1, 1901.

JOHN J. DAVIS, Clarksburg. JAMES L. HAMILL, Welch.
JOHN A. CAMPBELL, New Cumberland.

For the Term ending June 1, 1903.

P. C. EASTHAM, Point Pleasant. W. E. POWELL, Parkersburg.
GEORGE C. STURGISS, Morgantown.

For the Term ending June 1, 1905.

JAMES F. BROWN, Charleston. A. H. KUNST, Weston.
RICHARD RANDOLPH McMAHON, Harper's Ferry.

Officers of the Board of Regents.

GEORGE C. STURGISS, President.
A. J. HARE, Secretary.
A. R. WHITEHILL, Treasurer.
S. G. CHADWICK, Auditor.

OFFICERS OF INSTRUCTION

AND

ADMINISTRATION.

THE FACULTY.

JEROME HALL RAYMOND, Ph.D., President of the University, and Professor of Economics and Sociology.

A.B., Northwestern University, 1892; A.M., *ibid.*, 1893; Ph.D., University of Chicago, 1895. Traveling and studying in Europe and Asia, 1890-2; Lecturer in History, and Secretary, Chicago Society for University Extension and editor of "The University Extension Magazine," 1892-3; Professor of History and Political Science, Lawrence University, 1893-4; Lecturer in Sociology, and Secretary of the Class Study Department, University Extension Division, University of Chicago, 1894-5; Assistant in Sociology, *ibid.*, 1895; Professor of Sociology, and Secretary of the University Extension Department, University of Wisconsin, 1895-7; present position since 1897.

WAITMAN BARBE, A.M., Assistant to the President.

B.S., West Virginia University, 1884; M.S., *ibid.*, 1897; A.M., 1897. City editor "Daily State Journal," Parkersburg, W. Va., 1885-9; Managing editor, *ibid.*, 1889-95; Regent West Virginia State Normal Schools since 1895; Field Agent, West Virginia University, 1895-8; Graduate student, Harvard University, 1900; present position since 1898.

ST. GEORGE TUCKER BROOKE, LL.D., Professor of Common and Statute Law.

A.M., West Virginia University, 1889; LL.D., Wake Forest College, 1890. Student, University of Virginia Law School, 1867-9; member bar, Charlestown, W. Va., since 1869; present position since 1878.

WILLIAM P. WILLEY, A.M., Professor of Equity Jurisprudence and Commercial Law.

A.B., Dickinson College, 1862; A.M., *ibid.*, 1865; member bar, Morgantown, W. Va., and Baltimore, Md., 1865-78; editor Wheeling "Register," 1878-83; present position since 1883.

POWELL BENTON REYNOLDS, D.D., Chaplain of the University and Professor of Philosophy.

A.M., West Virginia University, 1887; D.D., Richmond College, 1890. Student, Richmond College, 1866-70; President Shelton College, 1872-84; President Buckner College, 1884-5; Professor of English, West Virginia University, 1885-9; Vice-President and Professor of Metaphysics, *ibid.*, 1889-93; Acting President, *ibid.*, 1893-5; Professor of Metaphysics and Political Science, *ibid.*, 1895-7; present position since 1897.

ALEXANDER REID WHITEHILL, Ph.D., Professor of Chemistry.

A.B., Princeton University, 1874; A.M., *ibid.*, 1877; Ph.D., Washington and Jefferson College, 1887. Fellow in Experimental Science, Princeton University, 1874-5; Graduate student, University of Leipzig and Freiberg

School of Mines, Germany, 1874-5; Professor of Experimental Science, University Mound College, 1876-81; Principal Linsly Institute, 1881-5; present position since 1885.

JAMES WILLIAM HARTIGAN, A.M., M.D., Professor of Biology.

M.D., University of Wooster, 1884; M.D., Bellevue Hospital Medical College, 1887; M.D., Baltimore Medical College, 1887; A.M., West Virginia University, 1888; M.D., Indiana College of Eclectic Medicine, 1888. Graduate in Obstetrics, Newlands College of Midwifery, 1892; Fellow of the Royal Microscopical Society (London, England), 1892; Ambulance Surgeon, Bellevue Hospital, 1886-7; Graduate student in Bacteriology, New York Post Graduate School and Hospital, Summer, 1897. Professor of Anatomy, Physiology and Botany, West Virginia University, 1887-9; Microscopist, West Virginia Agricultural Experiment Station, 1888-9; Surgeon, Corps of Cadets, West Virginia University, 1889-99; Instructor in Physical Training and Director of the Gymnasium, *ibid.*, 1891-98; present position since 1889.

JOHN LINDSAY JOHNSTON, C.E., Professor of Civil and Mining Engineering.

B.S., West Virginia University, 1883; M.S., *ibid.*, 1886; C.E., *ibid.*, 1889. Assistant Locating Engineer, W. V. & P. R. R., 1883-5; Draughtsman, C. W. & B. R. R., 1885; Locating and Construction Engineer, W. & C. Natural Gas Company, Pittsburg, 1885-6; Assistant to Division Engineer, B. & O. R. R., 1886; Assistant Engineer, Penna. R. R., 1886-90; Instructor in Engineering, West Virginia University, 1890-1; Professor of Applied Mathematics and Drawing, *ibid.*, 1891-3; present position since 1893.

SAMUEL B. BROWN, A.M., Professor of Geology and Mineralogy.

A.B., West Virginia University, 1883; A.M., *ibid.*, 1886. Graduate student, National Museum, 1884; Harvard University, 1891;. Teacher of Languages and Mathematics, Martinsburg, W. Va., 1883-5; Principal Glenville State Normal School, 1885-90; Assistant in Geology, West Virginia University, 1890-2; present position since 1892.

ROBERT ALLEN ARMSTRONG, A.M., Professor of English.

A.B., West Virginia University, 1886; A.M., *ibid.*, 1889. Principal West Liberty State Normal School, 1886-93; Member of bar of Wheeling, West Virginia, 1890; Professor of Mathematics, West Virginia University, 1893-4; Vice President, *ibid.*, 1897-9; Graduate student, University of Chicago, Summer, 1898; present position since 1894.

THOMAS CONDIT MILLER, A.M., Professor of Pedagogy, and Principal of the Preparatory School.

Graduate State Normal School, 1873; A.M., West Virginia University, 1889. Principal Fairmont High School, 1873-4; Student, Adrian College, 1875-7; Superintendent of Schools, Fairmont, W. Va., 1877-93; present position since 1893.

JAMES SCOTT STEWART, M.S., Professor of Mathematics.

B.S., West Virginia University, 1877; M.S., *ibid.*, 1880. Assistant in Preparatory School, West Virginia University, 1877-91; Professor of Mathematics, *ibid.*, 1891-3; Superintendent of Schools, Fairmont, W. Va., 1893-4; present position since 1894.

OKEY JOHNSON, LL.B., A.M., Dean of the College of Law, and Professor of Constitutional and International Law and the Law of Corporations.

LL.B., Harvard University, 1858; A.M., Marietta College, 1874. Admitted to the bar, 1858; Attorney-at-law, Middlebourne, 1858-62; Parkersburg, 1862-77; Member West Virginia Senate, 1870-1; Member West Virginia Constitutional Convention, 1872; Judge of West Virginia Supreme Court of Appeals, 1877-90; President, *ibid.*,, 1883-90; Attorney-at-law, Charleston, 1890-5; present position since 1895.

ROBERT WILLIAM DOUTHAT, Ph.D., Professor of the Latin Language and Literature.

A.M., Emory and Henry College, 1874; Ph.D., Roanoke College, 1877. Professor of Languages, Missouri University School of Mines and Metallurgy, 1873-84; President Collegiate Institute (New Mexico), 1884-7; President Collegiate Institute (Arkansas), 1887-9; Professor of Languages, Kentucky Military Institute, 1889-90; President Barboursville College, 1890-5; Professor of Ancient Languages, West Virginia University, 1895-7; present position since 1897.

ALFRED JARRETT HARE, A.B., Professor of the Latin Language and Literature.

A.B., West Virginia University, 1889. Assistant in Latin and Mathematics, Preparatory School, West Virginia University, 1889-96; Preparatory Professor of Ancient Languages and Mathematics, *ibid.*, 1896-8; present position since 1898.

LEE CLEVELAND CORBETT, M.S., Professor of Horticulture and Forestry, and Horticulturist of the West Virginia Agricultural Experiment Station.

B.S., Cornell University, 1890; M.S., *ibid.*, 1896. Assistant Horticulturist, Cornell University, 1891-2; Professor of Horticulture and Forestry, South Dakota Agricultural College, 1893-5; present position since 1895.

BERT HOLMES HITE, M.S., Professor of Agricultural Chemistry, and Chemist of the West Virginia Agricultural Experiment Station.

M.S., West Virginia University, 1890. Graduate student, John Hopkins University, 1891-5; Fellow in Chemistry, *ibid.*, 1893-5; Chemist of the West Virginia Agricultural Experiment Station since 1895; Professor of Organic Chemistry, West Virginia University, 1895-7; present position since 1897. Chief Chemist of the Geological and Economic Survey of West Virginia.

THOMAS EDWARD HODGES, A.M., Professor of Physics.

A.B., West Virginia University, 1881; A.M., *ibid.*, 1884. Principal, Morgantown Public Schools, 1881-6; Principal and Instructor in Natural Science and Pedagogy, Marshall College State Normal School, 1886-96; present position since 1896. Graduate student, Cornell University, Summer, 1897.

ANDREW DELMAR HOPKINS, Ph.D., Professor of Economic Entomology, and Vice-Director and Entomologist of the West Virginia Agricultural Experiment Station.

Ph.D., West Virginia University, 1893. Special Agent in Entomology, West Virginia Agricultural Experiment Station, 1890-1; Entomologist, *ibid.*, since 1891; Professor of Economic Entomology, West Virginia University, since 1896; Vice-Director of the Experiment Station since 1897.

THOMAS CLARK ATKESON, Ph.D., Dean of the College of Agriculture, and Professor of Agriculture.

LL.B., Kentucky University, 1874; Ph.B., Central Normal College, 1891; Ph.D., *ibid.*, 1893. Student, Kentucky Agricultural and Mechanical College, 1874-6; editor "West Virginia Agriculturist," 1873-4; associate editor "Farmers' Friend," 1882-99; associate editor "American Grange Bulletin," 1893-9; Practical farmer since boyhood; President and member of West Virginia State Board of Agriculture and Farmers' Institute Lecturer, 1891-9; Professor of Agriculture, West Virginia University, 1891-3; West Virginia State Grange Secretary, 1882-4; Lecturer, 1884-6; Overseer, 1886-96; Master, 1896-9; Regent West Virginia University, 1897; President, Barboursville College, 1896-7; present position since 1897.

FREDERICK LINCOLN EMORY, B.S., M.M.E., M.E., Professor of Mechanics and Applied Mathematics.

B.S., Worcester, Mass., Polytechnic Institute, 1887; M.M.E., Cornell University, 1896. Director Mechanical Department, Washington, D. C., High School, 1887-90; Superintendent Trades School, Concord Junction, Mass., 1890-1; Professor of Mechanical Engineering and Mechanic Arts, West Virginia University, 1891-3; Director Indianapolis, Ind., Industrial Training and Technical High School, 1893-5; Graduate student, Cornell University, 1895-6; M.E., Worcester Polytechnic Institute, 1899; present position since 1897. Member American Society of Mechanical Engineers.

LEWIS CASS WOOLERY, A.M., Professor of the Greek Language and Literature.

A.B., Bethany College, 1884; A.M., *ibid.*, 1888. Principal Lafayette Seminary, Higginsville, Mo., 1884-6; Professor of Greek, Bethany College, 1887-93; member bar, Louisville, Ky., 1893-5; Professor of Greek, Drake University, Des Moines, Iowa, 1895-7; present position since 1897.

CHARLES ALFRED ELLENBERGER, Director of the School of Music, and Professor of Music.

Graduate, New England Conservatory of Music, 1884; Graduate student, Boston and New York, 1895-7; Director School of Music, Ripon College, 1884-8; Private teaching, organist, and oratorio and choir director, Knoxville, Tenn., 1888-90; Director School of Music, Tompkinson Seminary, and organist, oratorio director, etc., Harrisburg, Pa., 1890-7; present position since 1897.

RICHARD ELLSWORTH FAST, LL.B., Ph.B., Professor of American History and Political Science,

LL.B., West Virginia University, 1886; Ph.B., *ibid.*, 1898; Hon. A.M., Bethany College, 1898. Practicing law, 1886-97; student, Harvard University, 1897; member West Virginia Senate, 1896-1900; Colonel 1st Infantry, W. V. N. G., 1893-97; Colonel, aide-de-camp, General Staff, W. V. N. G., 1899; Acting Commandant of Cadets, West Virginia University, 1897-1900; Instructor in American History and Political Science, *ibid.*, 1897-8; Assistant Professor, *ibid.*, 1898-9; present position since 1899.

FREDERICK WILSON TRUSCOTT, Ph.D., Professor of Germanic Languages and Literatures.

A.B., Indiana University, 1891; A.M., *ibid.*, 1892; A.M., Harvard University, 1894; Ph.D., *ibid.*, 1896. Instructor in German, Indiana University, 1891-3; Assistant in German, Harvard University, 1893-4; Scholar in Modern Languages, *ibid.*, 1894-6; Graduate student, University of Berlin, 1896-8; Assistant Professor of Germanic Languages and Literatures, West Virginia University, 1898-9; present position since 1899.

KENNETH McKENZIE, Ph.D., Professor of Romance Languages and Literatures.

A.B., Harvard University, 1891; A.M., *ibid.*, 1893; Ph.D., *ibid.*, 1895. Abroad, 1891-2; Instructor in Modern Languages, Union College, 1895-8; Assistant Professor of Romance Languages and Literatures, West Virginia University, 1898-9; present position since 1899.

CHARLES HENRY PATTERSON, A.M., Professor of Rhetoric and Elocution.

A.B., Tufts College, 1887; A.M., *ibid.*, 1893. Student in Elocution, 1887-8; Principal of High School, West Newbury, Mass., 1888-9; Principal and teacher of English and Elocution, Preparatory School, Turners Falls, Mass., 1889-91; student of dramatic art, Boston Museum, Margaret Mather and other companies, 1891-3; graduate student in English, Tufts College, 1891-3; Principal and teacher of English and Elocution, Preparatory School, Hinsdale, N. H., 1893-8; student, School of Expression, Boston, Mass., 1895; teacher, *ibid.*, 1896-7; student at Comedie Francaise, Paris, 1897; Graduate student, University of Chicago, Summer, 1899; pupil of M. T. Brown, S. S. Curry, Otis Skinner, George Berr, and

others; Assistant Professor of Rhetoric and Elocution, West Virginia University, 1898-9; present position since 1899.

FREDERICK PHILIP RUHL, D.V.S., Professor of Veterinary Science.

D.V.S., American Veterinary College, New York, 1884. Practicing veterinary medicine since 1884; Consulting Veterinarian, West Virginia State Board of Agriculture since 1896; present position since 1899.

JAMES MADISON BURNS, Major U. S. Army, Professor of Military Science and Tactics, and Commandant of Cadets.

Graduate of Beaver Academy. Entered the Union Army in 1861. Served in the 1st and 2nd West Va. Volunteers until the close of the war. Appointed 2nd Lieut., 17th U. S. Infantry, and served in that regiment until promoted Major in May, 1899. Professor of Military Science and Tactics, and Commandant of Cadets, Ohio State University, 1899-1900; present position since 1900.

LUCY CELESTE DANIELS, Ph.M., Associate Professor of European History.

B.L., University of Wisconsin, 1879; Ph.M., University of Chicago, 1895. Teacher at La Crosse, Wis., 1880-8, and in the Public Schools, Minneapolis, 1888-90; Instructor in English and Latin, Central High School, Minneapolis, 1889-92, and in the Girls' High School, Brooklyn, 1892-93; Instructor in History and Latin, Girls' Classical School, Indianapolis, 1893-4; Graduate student in Political Science and History, University of Minnesota, 1889-91, and University of Chicago, 1894-5; Instructor in History, Northwest Division High School, Chicago, 1895-6, and Lewis Institute, Chicago, 1896-9; Lecturer in History, West Virginia University, Summer Quarter, 1899; present position since 1899.

CLEMENT ROSS JONES, M.E., Assistant Professor of Mechanical Engineering.

B.S.C.E., West Virginia University, 1894; M.E., *ibid.*, 1897. Associate Principal, West Virginia College, 1894; Professor of Military Science and Mathematics, McKeesport Military College, 1895; Assistant in Mechanical Engineering, West Virginia University, 1895-8; present position since 1898. Associate Member American Society of Mechanical Engineers. Graduate student, Cornell University, 1899-1900.

RUSSELL LOVE MORRIS, C.E., Assistant Professor of Civil and Mining Engineering.

B.S.C.E., West Virginia University, 1895; C.E., *ibid.*, 1898. Consulting Engineer, State Board of Agriculture; Chief Draughtsman, West Virginia State Geological and Economic Survey; Assistant in Civil and Mining Engineering, West Virginia University, 1895-8; present position since 1898.

OTTO FOLIN, Ph.D., Assistant Professor of Physiological Chemistry.

B.S., University of Minnesota, 1892; Ph.D., University of Chicago, 1896; Graduate student, University of Upsala, 1896, and Universities of Berlin and Marburg, 1897-8; Instructor in General and Medical Chemistry, McKillip Veterinary College, 1894-6; practical work in Columbus Medical and Food Laboratories, 1899; present position since 1899.

JAMES DAVID THOMPSON, A.M., M.Sc., Assistant Professor of Mathematics.

Dalton Senior Mathematical Scholar, Owens College, Manchester, England, 1891; B.Sc., (1st in Mathematical Honors), Victoria University, England, 1892; M.Sc., *ibid.*, 1895; B.Sc., and University Exhibitioner in Mathematics, London University, 1893; A.B., (16th Wrangler, Mathematical Tripos), University of Cambridge, 1895; Natural Sciences Tripos, Part II, *ibid.*, 1896; Major Foundation Scholar, Trinity College, Cambridge,

1894-8; A.M., *ibid.*, 1899. Lecturer and Demonstrator in Physics, University College, Sheffield, England, 1896-8; Lecturer in Mathematics, *ibid.*, 1897-8; Lecturer in Applied Mathematics, Graduate School, University of Chicago, Autumn Quarter, 1898; Lecturer in Mathematics and Astronomy, West Virginia University, Summer Quarter, 1899; present position since 1899.

EDWIN BINGHAM COPELAND, Ph.D., Assistant Professor of Botany.

A.B., Leland Stanford Junior University, 1895; A.M., and Ph.D., University of Halle, Germany, 1896. Assistant in Biology, University of Wisconsin, 1893-4; Honorary Fellow in Botany, *ibid.*, 1896-7; Assistant Professor of Botany, Indiana University, 1897-8; Teacher of Science, State Normal School, Chico, California, 1899; present position since 1899.

HANNAH BELLE CLARK, Ph.D., Assistant Professor of Domestic Science and Dean of Women.

A.B., Smith College, 1887; Ph.D., University of Chicago, 1897; Graduate Student in Sociology, Smith College, 1887-88; Graduate Student in Sociology and Sanitary Science, University of Chicago, 1893-6; Instructor in Dearborn Seminary, Chicago, 1887-93 and 1894-9; present position since 1899.

JOHN BLACK JOHNSTON, Ph.D., Assistant Professor of Zoölogy.

Ph.B., University of Michigan, 1893; Ph.D., *ibid.*, 1899. Graduate student and Assistant in Zoology, *ibid.*, 1893-7; Instructor in Zoology, *ibid.*, 1897-9; present position since 1899.

ALFRED EDWARD THAYER, M.D., Assistant Professor of Materia Medica, Pathology, and Bacteriology.

M.D., New York College of Physicians and Surgeons (Columbia University), 1884. Hospital practice, New York, 1884-6; Graduate student, University of Gottingen, Germany, 1886-7; University of Vienna, Austria, 1887-8; Fellow in Pathology, Johns Hopkins University, 1889-90; Instructor in Anatomy, Medical Department, Yale University, 1890-1; Vital Statistician, New York City Health Dept., 1895-8; A. A. Surgeon, Marine Hospital Service, 1894 and 1898-9; present position since 1899.

DENNIS MARTIN WILLIS, LL.B., Instructor in Bookkeeping and Commercial Practice, and Principal of the Commercial School.

Instructor, Methodist Conference Seminary, Buckhannon, 1891-2; Instructor, West Virginia Business College, 1892-3; Instructor, Northwestern Academy, Clarksburg, 1893-4; Instructor, Central Commercial College, Cumberland, Md., 1894-5; Principal, Weston College of Commerce, 1895; present position since 1895.

EVA EMMA HUBBARD, Instructor in Drawing and Painting.

Graduate, Morgantown Female Seminary, 1876; student in Mrs. J. P. Wilkinson's studio, Wheeling, 1881-2; Instructor in Drawing and Painting, Wheeling Female College, 1883-4; student in the Carl Hecker Art School, New York City, 1884-5; Instructor in Fine Arts, Mountain Lake Park Summer Chautauqua, 1885-8; private studio, Wheeling, 1889-94; Instructor in Drawing and Painting, Mrs. M. Stephen Hart's School for Young Ladies, 1894-7; present position since 1897.

RUSSELL McMURPHY, Instructor on the Piano.

Graduate, New England Conservatory of Music, Boston, 1892; Principal Musical Department, St. Mary's College, Dallas, Texas, 1892-5; Graduate work with Barth in Berlin, 1895-6; Principal, Music Department, St. Mary's College, 1896-7; present position since 1897.

BENJAMIN GRAEFF PRINTZ, Director of the Gymnasium and Instructor in Physical Training.

Student, Hemenway Gymnasium, Harvard University; Director of the

Gymnasium and Instructor in Physical Training, Wittenberg College, 1892-8; present position since 1898.

FLORENCE MADISON SLITER, Instructor in Violin.

Graduate, New England Conservatory of Music, 1898; Graduate student, and Instructor in Normal Department, *ibid.*, 1898-9; present position since 1899.

THEODORE CHRISTIAN RUDE, Instructor on Stringed Instruments.

Student, Royal Conservatory of Music, Leipzig, Germany, 1883-4; student, A. Brun, Lucian Andre, Jean Tietrapertosa, Paris, 1895-6; teacher in Iowa College, Grinnell, Iowa, 1890-4; teacher in Mary Nash Female College, Sherman, Texas, 1894-5; teacher in Patton Seminary, Dallas, Texas, 1897-8; teacher in Ouachita Baptist College, Arkadelphia, Arkansas, 1898-9; present position since 1899.

MARIE HESTER, Instructor in Voice.

Graduate Western College for Women, Oxford, Ohio; graduate student, Boston, 1881-8; concert and opera, Australia and England, 1888-9; Principal Vocal Department, Ferry Hall, Lake Forest University, 1890-5; Principal Vocal Department, Stevan School, Chicago, Illinois, 1895-7; Principal Vocal Department, Michigan Seminary, Kalamazoo, Michigan, 1897-8; present position since 1899.

LLOYD LOWNDES FRIEND, A.B., Instructor in English.

A.B., West Virginia University, 1897. Assistant in West Virginia University Preparatory School, Montgomery, 1897-8; Fellow in English, West Virginia University, 1898-9; Assistant in English, *ibid.*, 1899-1900; present position since 1900.

JOHN ETHAN HILL, Ph.D., Instructor in Mathematics.

Ph.B., Yale University, 1885; Ph.D., Clark University, 1895. Resident Engineer, C. M. & St. P. R. R., 1885-8; teacher of mathematics, Louisville Military Academy, Louisville, Ky., 1888-1890; Professor of Higher Mathematics and Civil Engineering, Highland Park College, Des Moines, Iowa, 1890-2; Fellow in Mathematics, Clark University, Worcester, Mass., 1892-5; Tutor in Mathematics, Columbia University, 1895-8; Teacher of Mathematics and Science, Stamford High School and Adelphi College, 1898-1900; present position since April, 1900. Member of the American Mathematical Society; member of the Scientific Alliance; member of the American Association for the Advancement of Science; junior member of the American Society of Civil Engineers.

JOSEPH WILLIAM CARR, Ph.D., Instructor in German.

A.B., Harvard University, 1893; A.M., *ibid.*, 1895; Ph.D., University of Leipsic, Germany, 1899. Classical Master, The Morristown School, Morristown, N. J., 1894-7; Graduate student of Germanic Philology, University of Leipsic, Germany, 1897-9; Instructor in German, Harvard University, and Radcliffe College, 1899-1900. Present position since 1900.

WILLIAM JACKSON LEONARD, Instructor in Fine Arts.

Student, The Cowles Art School, Boston, 1889-90; pupil of Jean Paul Laurens and Benjamin Constant, Paris, 1891-93; student, Academie Julien and Ecole des Beaux Arts, Paris; special student, Harvard University; Studio and Instructor, Boston, and Hinsdale, N. H. Present position since 1900.

GRACE MARTIN, B.M., Assistant on the Piano.

Graduate, Virginia College for Young Ladies, 1893; B.M., *ibid.*, 1894. Instructor in Piano Department, *ibid.*, 1893-4; graduate student, Peabody Institute, Baltimore, 1895-6; present position since 1897.

EDGAR STEWART, LL.B., Assistant in Law.

LL.B., West Virginia University, 1896. Present position since 1898.

ELIZABETH LEE WHITESCARVER, Assistant in Shorthand and Typewriting.

Student in Commercial School, West Virginia University, 1896-8; present position since 1898.

DANIEL WEBSTER OHERN, A.M., Assistant in Greek.

A.B., Drake University, 1898; A.M., West Virginia University, 1899. Fellow in Greek, West Virginia University, 1898-9; present position since 1899.

SIMEON CONANT SMITH, A.B., Assistant in Rhetoric and Elocution.

A.B., Tufts College, 1898; Fellow in Rhetoric and Elocution, West Virginia University, 1899-1900; present position since 1900.

ENRIQUE MONTOULIEU Y DE LA TORRE, A.B., Assistant in Spanish.

A.B., University of Havana, 1897. Student, West Virginia University, 1899-1900; present position since 1900.

BERNARD CAMILLUS BONDURANT, A.M., Fellow in Latin.

A.B., Hampden-Sidney College, 1891; A.M., Bethany College, 1898. Professor of Latin, Bethany College, 1895-9; graduate student, West Virginia University, 1898.

THOMAS CARSKADON JOHNSON, B.S.Agr., Fellow in Mathematics.

B.S.Agr., West Virginia University, 1896. Instructor in Mathematics and Science, Lee Military Institute, 1896-9.

WILLIAM FRAZIER NARET, B.S.Agr., Fellow in Agriculture.

B.Agr., West Virginia University, 1898; B.S.Agr., *ibid.*, 1899.

ROBERT MORRIS, A.B., LL.B., Fellow in Economics.

A.B., University of Nashville, 1896; A.B., and LL.B., West Virginia University, 1899.

CHARLES FENTON HOLDEN, Ph.B., Fellow in English Literature.

Ph.B., West Virginia University, 1899.

CHARLES CLEAR BALLARD, A.B., Fellow in Romance Languages.

A.B., Union College, 1899.

ALLEN WILSON PORTERFIELD, A.B., Fellow in German.

A.B., West Virginia University, 1899; Instructor in Shepherd College State Normal School, 1899.

WILLIAM HENRY WHITHAM, B.S., Fellow in Physics.

B.S., West Virginia University, 1899.

ELEANOR BROWN MORELAND, A.B., Fellow in Domestic Science.

A.B., West Virginia University, 1898. Graduate student in Domestic Science, Lewis Institute, 1899-1900.

SPECIAL LECTURERS FOR THE SUMMER QUARTER, 1900.

FRANK WILLIAM GUNSAULUS, D.D., President Armour Institute of Technology, Chicago, Ill.

ANDREW SLOAN DRAPER, LL.D., President University of Illinois, Champaign, Ill.

THOMAS CORWIN MENDENHALL, Sc.D., LL.D., President Worcester Polytechnic Institute, Worcester, Mass.

JAMES WHITFORD BASHFORD, Ph.D., D.D., President Ohio Wesleyan University, Delaware, Ohio.

CHARLES FRANKLIN THWING, D.D., LL.D., President Western Reserve University, Cleveland, Ohio.

WILLIAM Z. RIPLEY, Ph.D., Assistant Professor of Sociology, Massachusetts Institute of Technology, Boston, Mass., and Lecturer in Demography, Columbia University, New York City.

EDWARD WHEELER SCRIPTURE, Ph.D., Director Psychological Laboratory, Yale University, New Haven, Conn.

THOMAS NIXON CARVER, Ph.D., Professor of Economics and Sociology, Oberlin College, Oberlin, Ohio.

HARRY SANGER RICHARDS, Ph.B., LL.B., Professor of Law, State University of Iowa, Iowa City, Iowa.

THOMAS PERRY JACOBS, A.M., Attorney at Law, New Martinsville, W. Va.

HENRY SHERWOOD GREEN, A.B., Professor of Greek and Latin, Bethany College, Bethany, W. Va.

CHARLES CHOLLET, A.B., Columbia University, New York City. French.

ADA VIRGINIA HOUSTON, Piano.

ROBARTS HARPER, F.R.G.S., London, England, Travel-Lectures.

CLOYD NORTH McALLISTER, A.B., Assistant in Psychological Laboratory, Yale University, New Haven, Conn.

PEARL MARTIN PEARSON, A.M., Cumnock School of Oratory, Northwestern University, Evanston, Ill.

G. A. SCHRAMM, Buffalo, N. Y., Lecturer on Memory.

STAFF OF THE PREPARATORY SCHOOL AT MONTGOMERY.

JOSIAH KEELEY, A.B., Principal of the Preparatory School at Montgomery.

A.B., West Virginia University, 1896. Present position since 1897.

RUBY RAY KNIGHT, B.S., Assistant in the Preparatory School at Montgomery.

B.S., Ohio State University, 1896. Present position since 1896.

ALTHA WARMAN, A.B., Assistant in the Preparatory School at Montgomery.

A.B., West Virginia University, 1893. Graduate student, *ibid.*, 1897-8; present position since 1898.

LIBRARY STAFF.

ELIZA JANE SKINNER, Librarian.

Student, Zurich, Heidelberg and Paris, 1893-5; Librarian, Matson Public Library, Princeton, Ill., 1896; Library School, Armour Institute of Technology, 1896-7; Instructor in Cataloguing, Summer School of Library Science, University of Wisconsin, 1898; Library Director, West Virginia University, 1897-8; present position since 1898.

ANNA BANCROFT WHITE, B.S., Assistant in the Library.

B.S., West Virginia University, 1895. Graduate student, *ibid.*, 1897-8; present position since 1897.

WILLIAM WINFRED SMITH, Assistant in the Library.

Present position since 1899.

AGRICULTURAL EXPERIMENT STATION STAFF.

JAMES HENRY STEWART, A.M., Director and Agriculturist.

ANDREW DELMAR HOPKINS, Ph.D., Vice-Director and Entomologist.

BERT HOLMES HITE, M.S., Chemist.

LEE CLEVELAND CORBETT, M.S., Horticulturist.

WILLIAM EARL RUMSEY, B.S.Agr., Botanist and Assistant Entomologist.

HORACE ATWOOD, M.S., Assistant Agriculturist.

CHARLES DANFORTH HOWARD, B.S., Assistant Chemist.

EUGENE CARL FRAME, Clerk and Stenographer.

MARTHA ANNE STEWART, Librarian.

OTHER OFFICERS.

ALBERT JACKSON COLLETT, Secretary to the President.

ELLA ELIZABETH EGBERT, Secretary to the President.

HENRY ST. CLAIR, Armorer.

WEST VIRGINIA UNIVERSITY.

Organization.

The University organization consists of the following colleges, schools, and departments:

I. The College of Arts and Sciences.
II. The College of Engineering and Mechanic Arts.
III. The College of Agriculture.
IV. The College of Law.
V. The School of Music.
VI. The Commercial School.
VII. The Preparatory Schools.
VIII. The Department of Drawing and Painting.
IX. The Department of Instruction by Correspondence.
X. The Military Department.
XI. The Department of Physical Training.
XII. The Department of Domestic Science.

Origin and Location.

In 1814 the Legislature of Virginia passed an act incorporating the Monongalia Academy, and locating it at Morgantown. The first building was a one-story brick structure, divided into two rooms. In 1828 this building was sold and a two-story brick building erected. As a further endowment, the Virginia Legislature passed an act authorizing the trustees of the Academy to raise twenty thousand dollars by a lottery, and the drawings for this lottery were conducted January 26, 1832. In later years the Monongalia Academy became an institution of wide reputation, drawing students at one time from fourteen states. For more than fifty years it was the leading school in Virginia west of the mountains.

On July 2, 1862, Congress passed an act donating public lands to the several states to establish "colleges for the benefit of Agriculture and Mechanic Arts." In 1864 this act was extended to the new state of West Virginia, and in 1867 the West Virginia Agricultural College was founded. The trustees of the Monongalia Academy gave to the state all of the real estate and personal effects of the Academy. The building and grounds of Woodburn Seminary, a

school for girls in Morgantown, were also donated, and the new College succeeded the old academy and seminary, inheriting an honorable record and much good will. The first faculty meeting was held August 20, 1867, and on September 2 of that year the school was formally opened. In 1868 the name of the new institution was changed by act of the Legislature to the West Virginia University.

Morgantown, the seat of the University, is the county seat of Monongalia county, and is a beautiful little town of thirty-five hundred inhabitants, on the Monongahela river and the Baltimore and Ohio Railroad, 103 miles east of Wheeling, and the same distance south of Pittsburg. It has the modern conveniences of natural gas, waterworks, electric lights, and local and long-distance telephones, and is noted for its healthful conditions, physical, social and moral. There are churches of the following denominations in the town: Presbyterian, Methodist Episcopal, Methodist Protestant, Baptist, Protestant Episcopal, Lutheran, Christian, and Roman Catholic. There are no saloons in Morgantown.

Few institutions of learning have more attractive natural sites. The University grounds border the Monongahela river, and afford a most picturesque outlook. The campus comprises about twenty-five acres, a tract of seven and a half acres having been added last year. The University also has a farm of about one hundred acres for the use of the Agricultural Experiment Station and the College of Agriculture.

Funds.

The funds for maintaining the University are derived from the following sources: (1) Interest on the land grant endowment of $114,750; (2) the Morrill fund; (3) the Hatch fund; (4) biennial appropriations by the State Legislature; (5) fees and tuitions, the latter being paid only by students from other states.

Buildings.

There are six main brick buildings, as follows:

1. University Hall, a four-story building, containing lecture rooms and the biological laboratory. A large right wing to this building is now being constructed.

2. Martin Hall, a three-story building, containing lecture rooms, the Library, and society halls.

3. Science Hall, a four-story building, containing lecture rooms and laboratories for the departments of Physics, Chemistry, Geology, Civil Engineering, and Drawing and Painting, and also the President's office.

4. Commencement Hall, a large two-story building, containing a commodious chapel with 1500 seats, and the gymnasium.

5. Agricultural Experiment Station, a two-story building, containing laboratories, lecture rooms, and offices.

6. Music Building, a two-story building, containing rooms and instruments for the School of Music.

The lecture rooms are crowded, and there is pressing need for additional buildings, and these are now about to be erected, namely:

7. An Armory and Drill Hall for the Military Department;

8. A Library and Museum Building;

9. A Mechanical Hall.

DEPARTMENTAL EQUIPMENTS.

Physics.

The department of Physics has its lecture room and laboratories in Science Hall. A large room on the basement floor of this building has been fitted up as a laboratory and equipped with apparatus for individual experimental work. Work of this character is required of students in every regular course given in the department.

The apparatus for electrical measurements and test work is especially well selected and of superior quality. Students in electrical subjects have opportunity to become familiar with the use of the latest and most improved forms of apparatus for measurement of current, resistance, electromotive force, quantity, capacity, induction, etc.

The lecture table equipment is also quite extensive. The laboratory is open for the use of students every afternoon except Saturday. All laboratory work is under the personal supervision of the instructor.

Chemistry.

The rooms assigned to this department are located on the second floor of Science Hall, and consist of a lecture room and two large laboratories. Connected with these are a dark room, a weighing room, and a preparation room. The laboratories afford working space for fifty students at a time, and are abundantly supplied with water and gas and the chemicals and apparatus necessary for practical work. This apparatus includes a large number of pieces used in illustrating the elementary principles of the science, as well as many of the more expensive instruments used in analytical work. An excellent collection of the latest text and reference books is kept within easy reach of the students, and the aim has been to make the laboratory outfit as complete and ample as possible.

Geology.

The equipment for purposes of illustrative teaching in this subject consists of many thousands of fossils, casts and models, a good

collection of minerals, specimens of all of the important building stones, Ward's College Collection in Palaeontology, showing the advancement from the early forms of life to those of the present time. The University is situated in the midst of a great coal producing region, within five miles of the western fold of the Appalachian mountains, and oil and gas wells are but a short distance away. The natural facilities, therefore, for the study of Geology are unsurpassed.

Biology.

The Biological department is supplied with compound microscopes of the Zeiss pattern. These instruments are recognized by microscopists as the best, and were specially imported from Germany for this department. Its equipment also includes a projection microscope, large freezing and small microtomes, numerous charts, manikins, models, specially prepared human and comparative anatomical preparations; plant and animal histological preparations; abundant material for the study of human and comparative osteology, vivisection and physiological chemistry apparatus; a complete bacteriological outfit with accessories for microscopical photography and air analysis, a Hesse air tester, various physiological apparatus, including a sphygmograph, a haemarumascope, a centrifuge, a spirometer, a large eudiometer, and an Edison X-ray machine, known as the "Edison instantaneous air-brake-wheel apparatus," with a fluoroscope and dark room, including everything necessary for practical work with this piece of apparatus.

Entomology.

The equipment of the Entomological department consists of a collection of over 20,000 specimens and over 7,000 separate notes on original observations taken in West Virginia by the Entomologist. The apparatus for collecting, breeding, mounting, preserving and studying specimens is complete. The microscopic outfit is sufficiently perfect for carrying on any class of study in this line. The photographic department is thoroughly equipped for the requirements of entomological and other work.

Botany.

The collections and equipments of the Botanical department offer superior facilities for the study of economic botany, and the practical features of systematic botany in its relation to agricultural pursuits, containing, as it does, a large series of West Virginia plants, and a special collection of economic plants, weeds and diseased plants; also an excellent outfit for the study of plant diseases.

Civil Engineering.

The material equipment of this department consists of the civil engineering laboratory, equipped with a collection of apparatus and instruments for instruction in engineering believed to be complete and modern, consisting of transits, levels, theodolites, surveyors' compasses, aneroid barometers, plane table, solar compass, sextant clinometers, odometer, pendometers, telemeters, prismatic compass, hand levels, a full collection of drawing instruments, blue printing outfit, complete set of United States standard weights and measures, testing machines for testing strength of materials, as wood, iron, steel, stone, cement, mortar, etc.; a drawing room containing a large number of descriptive geometry models, and models of bridges, furnaces and many other structures, and a large number of wood and plaster paris casts and models pertaining to descriptive geometry, architecture, etc. The equipment of the department of Physics, described above, is of great value to students in the Engineering courses.

Commercial School.

The Commercial School has recently been fitted out with the latest improved modern commercial school furniture, including three new banking counters and office desks, and a complete equipment for the most extensive business practice. Ten new Smith Premier typewriters have been added to the Typewriting department for the use of students.

Gymnasium.

The gymnasium includes all of the first story of Commencement Hall, and is well furnished with Indian clubs, dumb-bells, wands, vaulting, horizontal, traveling and parallel bars; finger, wrist and hand machines; flying rings, chart and intercostal machines, quarter circle, sculling and rowing machines, adjustable ladder, climbing ladder, rosary, plain rope trapeze, traveling rings, striking bags and drum, boxing gloves, hammer and shot, heavy bells, medicine ball, manometer, lockers, large plunge bath and shower baths, horse, batteau boards, take stands, and basket ball outfit.

Young women have the same advantages in the Gymnasium as young men, certain hours being reserved for them, and regular classes being formed exclusively for them.

Athletics.

Besides the regular military drill, physical training exercises and gymnasium instruction, sufficient attention is given to field sports, such as foot-ball, base-ball, track contests, etc.

All field sports are under the control of the Faculty Committee on Athletics. The West Virginia University Athletic Association has been organized and chartered for the purpose of developing the athletic interests of the University.

The athletic ground, adjoining Commencement Hall, is well adapted to out-of-door sports.

While athletics are given all proper encouragement, they are not permitted to interfere with the regular work of the students.

Societies.

The literary, scientific, religious and other societies of the University are the following:

1. The Columbian Literary Society. Regular meetings every Friday night in its own hall in Martin Hall. Membership open to all students of the University.

2. The Parthenon Literary Society. Regular meetings every Friday night in its own hall in Martin Hall. Membership open to all students of the University.

3. The Engineering Society. Regular meetings the first and third Friday nights of each month in room 14, Science Hall. Membership open to all students in the College of Engineering and Mechanic Arts.

4. The Agricultural Society. Regular meetings every Thursday night in the lecture room of the Experiment Station. Membership open to all students in the College of Agriculture.

5. The West Virginia Academy of Sciences, Arts, and Letters. Regular meetings the first Tuesday night of every month in the lecture room of the Experiment Station. Membership open to students and instructors of the University, and such others as may be elected.

6. The Young Men's Christian Association. Regular meetings at 6:30 P. M. every Friday in room 23, Science Hall. Membership open to all young women in the University.

7. The Young Women's Christian Association. Membership open to all young women in the University.

8. The Choral Society. Regular meetings every Tuesday at 7:30 P. M. in Commencement Hall. Membership open to all students in the School of Music and all others interested.

9. The Athletic Association, organized for the purpose of encouraging and developing the athletic interests of the University. Incorporated under the laws of West Virginia. Membership open to all students of the University.

Theses.

Every candidate for a degree is required to present an acceptable thesis before the degree will be conferred. The thesis counts as one full course. Each student elects the department of study in which he will write his thesis, and selects the subject of the thesis in conference with the head of that department. The subject of the thesis and the thesis itself must be approved by the head of the department in which the student elects to write his thesis.

Theses must be typewritten with black non-copying record ink on Crane's Japanese linen paper, of quality 24 pounds to the ream, folio size. This paper, of right quality and correct size, viz., 8x10 inches, may be obtained at the University book room, or at any bookstore in Morgantown. A margin of one and one-fourth inches must be left at the left edge of each sheet, and a margin of three-fourths of an inch on the other edges. The title page should follow, *mutatis mutandis*, the sample title page on the bulletin board in the Library.

When the thesis is typewritten and ready for binding, the student will secure the written approval of the professor under whose direction the thesis has been prepared. This approval is to be written on a blank sheet accompanying the thesis, and must be obtained before the thesis is delivered at the Library.

All theses must be delivered to the University Librarian not later than ten days before the degree is conferred. The theses will be bound uniformly, and remain permanently in the University Library. The cost of binding each thesis is sixty cents, and this sum must be handed to the Librarian when the thesis is delivered at the Library.

The Committee on Graduation has prescribed the following regulations regarding theses:

1. The thesis must be written on some topic in the student's major department of study. Including his thesis, a student must take ten courses in his major department.

2. The subject of the thesis shall be selected in consultation with the major professor, not later than six months before the degree is conferred.

3. The preparation of the thesis shall count as one course, and if the thesis is uncompleted at the beginning of the last quarter before the degree is conferred, the student shall not take more than two additional courses during that quarter.

4. The student shall submit to his major professor, not later than two months before the degree is conferred, the bibliography of his subject, and an outline of his thesis.

5. The first draft of the thesis shall be submitted to the major professor not later than thirty days before the degree is conferred.

6. The final draft shall be submitted to the major professor not later than two weeks before the degree is conferred.

Prizes.

All contestants in any of the oratorical contests of the University must have received credit for at least one course in Elocution.

No composition, in whole or in part, shall be submitted in competition for two prizes.

Only undergraduate students are eligible for any prize offered.

No student shall be eligible to enter any contest who has not been a resident student in this University for at least one quarter preceding the quarter in which the contest is to be held, and who is not a resident student in good standing in the University in the quarter in which the contest is held.

No successful contestant may become a second time a competitor for the same prize. The following prizes are open to students in various departments of the University:

I. The Wiles Prizes in Oratory.

Mr. John W. Wiles, A.B., of the class of 1894, a citizen of Morgantown, has offered the following prizes to be awarded each year for excellence in original oratory, for which students graduating in October, January, April or June of any one year may compete:

(a) A cash prize of one hundred dollars to the competitor who is adjudged best in original oratory;

(b) A gold medal to the competitor who is adjudged second best in original oratory.

The conditions upon which the awards will be made are as follows:

1. All members of the graduating classes who wish to take part in the contest shall hand their names to the President of the University not later than the first Monday in March.

2. There will be a public preliminary contest on the evening of the third Friday in April.

3. For this preliminary contest the judges shall be selected by the President of the University.

4. The judges shall select for the final contest not more than five speakers who, in their judgment, shall excel.

5. No oration on either preliminary or final contest shall be more than fifteen minutes long.

6. The judges shall grade each oration on a scale of fifty for thought and composition and fifty for delivery.

7. For the final contest, the President of the University shall

select three judges who are not connected with the University, and, if possible, non-residents of West Virginia, and of different professions.

8. There shall be no conference between the judges after either preliminary or final contest. Each judge shall be waited upon after the contest by a committee of two, chosen by the contestants. This committee shall average the grades of the judges, and from these grades make up the final result.

9. The contestants who are selected for the final contest may present for the final contest either the same oration they presented in the preliminary contest, or a new one.

10. All contestants in the preliminary contest shall submit typewritten copies of their orations to the judges on the preliminary contest at least one week before the preliminary contest, and the contestants in the final contest shall submit typewritten copies of their orations to the judges on the final contest at least two weeks before the final contest.

11. The places of the contestants on the program shall be decided by lot in both preliminary and final contest.

12. No contestant shall enter the final contest who has failed to make seventy-five in a possible one hundred in the preliminary contest.

13. Should no contestant make at least ninety in a possible one hundred in the final contest, no money will be paid by Mr. Wiles, but the contestant making the highest grade will be given a gold medal, and the one making the next highest grade will be given a silver medal.

II. The Scott Prize in Declamation.

A prize of one hundred dollars will be awarded each year by Hon. N. B. Scott, United States Senator from West Virginia, to the woman student in any department of the University who excels in declamation.

The conditions on which the award will be made are as follows:

1. All women in the University who wish to take part in the contest shall hand their names to the President of the University not later than the second Monday in April, and no one shall be allowed to enter this contest after that date.

2. If not more than nine wish to contest, there will be no preliminary contest.

3. If more than nine wish to contest, there will be a preliminary contest on the third Saturday in April.

4. At the preliminary contest there shall be present only the three judges who shall be selected by the President of the University.

5. The judges shall select for the final contest the nine speakers who, in their judgment, shall excel in declamation.

6. The final contest shall be held on the Monday evening of Commencement week.

7. For the final contest three judges shall be selected by the President of the University.

8. The contestants may present either the same declamation presented in the preliminary contest, or a new one.

9. Each contestant shall submit her selection to the Professor of Elocution for approval.

10. No declamation shall take longer than twenty minutes in delivery.

11. No one who has given public recitals, or taken part in public performances, receiving pay therefor, shall be eligible to compete. Such pay shall not be construed to mean prizes.

12. No graduate of a recognized school of oratory shall be eligible to compete.

III. The Inter-Society Prizes.

Prizes aggregating one hundred and fifteen dollars are awarded annually by the Board of Regents of the University to the literary society whose representatives excel in declamation, original oratory, essay writing, and debate. The conditions on which the awards are made are as follows:

1. The inter-society contest shall hereafter consist of two orations, two essays and two declamations, and there shall be a separate evening for the joint debate between representatives of the two literary societies.

2. All undergraduate members of the Parthenon and Columbian Literary Societies in attendance at the University shall be eligible contestants on the inter-society contest and the joint debate.

3. Each literary society shall, at its last regular meeting of the fall quarter, select the two debaters who shall represent it in the annual joint debate, and the declaimer, essayist and orator who shall represent it in the annual inter-society contest.

4. The joint debate shall take place on Thursday evening of the week before Commencement.

5. In the joint debate no debater shall speak longer than thirty minutes.

6. The inter-society contest shall take place on Tuesday evening of Commencement week.

7. In the inter-society contest the orations, essays and declamations shall not exceed twenty minutes in length each.

8. In the joint debate the question for debate shall be chosen in the following manner:

In the scholastic year 1900-1, and in every alternate year thereafter, the representatives of the Parthenon Literary Society shall propose to the representatives of the Columbian Literary Society the question for debate not later than January 6, and the representatives of the Columbian Literary Society shall announce their choice of the affirmative or the negative side of the question not later than January 20. In the scholastic year 1901-2, and in every alternate year thereafter, the representatives of the Columbian Literary Society shall, in like manner, not later than January 6, propose the question for debate, and the representatives of the Parthenon Literary Society shall decide not later than January 20, whether they will affirm or deny in the discussion of the question proposed.

9. Fifty dollars from the Current and Contingent Fund shall be given to the society whose representatives win the joint debate.

10. Thirty dollars shall be given to the society whose representative in the inter-society contest shall excel in oratory.

11. Twenty dollars shall be given to the society whose representative in the inter-society contest shall present the best essay.

12. Fifteen dollars shall be given to the society whose representative in the inter-society contest shall excel in declamation.

13. The decisions in the joint debate and inter-society contest shall be made by three judges for each contest. These judges shall be selected by the Committee on Prizes and Contests. It shall be the duty of this committee to arrange all matters of detail connected with these contests. They shall be judges of the eligibility and election of all contestants, arrange the programs, decide upon the dates, and lay down whatever additional rules may be necessary for the proper management of these contests.

IV. The Edward Thompson Company Prize in Law.

A prize of "The American and English Encyclopaedia of Law," value one hundred dollars, will be awarded annually by the Edward Thompson Company to the student in the Senior class of the College of Law who shall write the best essay on a subject selected by the faculty of the College of Law. The subject for 1899-1900 is: "What is the Effect of the Fourteenth Amendment to the Constitution of the United States upon the Police Powers of the States?"

The subject for 1900-1901 is: "Does the Protection of Society Demand Any Modification of the Right of Trial by Jury? If so, what?"

The conditions under which this prize is awarded are stated below.

V. The Regents' Prize in Composition.

A prize of twenty-five dollars is awarded annually by the Board of Regents of the University to the student in any of the regular college courses who shall write the best essay on a topic selected by the Committee on Prizes and Contests. The subject for the year 1899-1900 is: "High Schools in West Virginia." The subject for the year 1900-1901 is: "The Training of Teachers in West Virginia."

The conditions on which this prize is awarded are stated below.

VI. The Woman's Christian Temperance Union Prize.

A prize of twenty-five dollars will be awarded in 1900 by the Woman's Christian Temperance Union of Morgantown to the student who shall write the best essay on "The Passing of Alcohol."

The conditions on which this prize is awarded are given below.

For 1901, The Woman's Christian Temperance Union of Morgantown offers a prize of twenty-five dollars for excellence in original oratory.

The conditions upon which the award will be made are as follows:

1. The orations shall advocate some phase of temperance reform.

2. All students in the University are eligible to compete for this prize under the rules and regulations established by the Committee on Prizes and Contests.

3. Students who desire to take part in the contest shall hand their names to the Committee on Prizes and Contests not later than the first Monday in April.

4. The Committee on Prizes and Contests shall decide whether a preliminary contest is necessary, and, if so, shall determine the date and arrange the details.

5. The Committee on Prizes and Contests shall select the judges for both preliminary and final contests and make all arrangements regarding the details of both contests.

Conditions of Awarding Essay Prizes.

The following rules and regulations will govern the award of prizes for essays:

1. No limit is set to the length of the essays submitted in competition for these prizes.

2. All essays must be typewritten with black non-copying record ink, on Crane's Japanese linen paper, of quality twenty-four pounds to the ream, folio size. This paper, of right quality and size, viz., 8x10 inches, may be obtained at the University book room, or at any book-store in Morgantown. A margin of one and one-fourth inches must be left at the left edge of each sheet, and the margin

must be three-fourths of an inch on the other edges. The title page will follow, *mutatis mutandis*, the sample title page on the bulletin board in the Library.

3. On the title page of each essay must be written an assumed name, and under cover with the essay must be sent a sealed letter containing the true name of the writer and superscribed with his assumed name.

4. The copies of all essays submitted for these prizes become the property of the University Library, and the essay which receives a prize shall have endorsed upon it a certificate of that fact.

5. The essays submitted for these prizes must be deposited not later than the first Saturday in June with the Committee on Prizes and Contests. This committee will appoint three judges for each prize, and the prize will be awarded to the writer of the essay declared by two of the judges to be the best.

6. The decision of the judges will be announced by the President of the University at Commencement.

VII. The Elkins Prizes in Greek.

A prize of sixty dollars to the student who makes the highest average grade in the first college year's work in Greek, and a prize of forty dollars to the student who makes the next highest grade in the same work, have been offered by Hon. Stephen B. Elkins, United States Senator from West Virginia.

The conditions on which the awards will be made are as follows:

1. No student will be eligible to these prizes who has not been in the Greek class during the entire three quarters of the year (fall, winter, and spring).

2. In making the awards equal consideration will be given to the daily class work and to the examinations of the entire year.

3. The awards will be made by a committee consisting of the President of the University, the Professor of Greek and the Assistant in Greek.

4. The awards will be announced at Commencement.

VIII. The Jas. F. Thompson Prize in Anatomy and Physiology.

A prize of twenty-five dollars, the gift of Mr. Jas. F. Thompson, of Martinsburg, W. Va., will be awarded annually to the undergraduate student who does the best work in Anatomy and Physiology for three quarters. The award will be determined by the Professor of Biology. The decision will be announced at Commencement.

IX. The Regents' Prizes in Declamation.

The Board of Regents of the University annually awards to the student in the Preparatory School who excels in declamation, a

prize of fifteen dollars, and prizes of ten dollars and five dollars respectively to the contestants who rank second and third. The conditions under which the awards are made are as follows:

1. Students in the Preparatory School who desire to compete shall hand in their names to the Principal of the Preparatory School not later than April 1.

2. If not more than nine students desire to compete there will be no preliminary contest, but if more than nine desire to contest, the Principal of the Preparatory School will arrange for a preliminary contest to select the nine who shall excel in declamation, and these nine shall take part in the final contest.

3. The final contest will be held on the Saturday evening preceding Commencement.

4. The judges of this contest shall be selected by the Principal of the Preparatory School.

X. The James O. Thompson Prize in English.

A prize of ten dollars, the gift of Rev. James O. Thompson, Editor of the Mountain Echo, Keyser, W. Va., will be awarded annually to the college student who shows the best attainment on the work of the first year in English Composition. The committee of award will be the President of the University, the Professor of English Literature, and the Professor of Rhetoric.

XI. The Aurora Grange Prize.

A prize of ten dollars is awarded annually by Aurora Grange No. 372, to any student enrolled in the College of Agriculture for the current year who shall write the best essay on a topic selected by the Grange. The subject for the year 1899-1900 is: "Agriculture in the Public Schools." The subject for 1900-1901 is: "Influence of Heredity on the Improvement of Breeds."

The conditions on which this prize is awarded are the same as those governing the other essay prizes, except that the judges shall be selected by the Grange.

XII. The Dayton Prize in Domestic Science.

Hon. Alston G. Dayton, member of Congress from the Second District of West Virginia, offers a prize of twenty-five dollars to the young woman who makes the most progress in Domestic Science for the year 1899-1900 in the West Virginia University, the prize to be awarded on Commencement Day, based upon the judgment of the teacher in charge of the Department of Domestic Science.

XIII. The Atkinson Prizes.

(a.) Hon. Geo. W. Atkinson, Governor of West Virginia, offers a prize of twenty-five dollars in gold to the best student among the

men in the University. This prize will be awarded by the Committee on Prizes and Contests, and will be announced and presented at the Commencement in June. Governor Atkinson says:

"This offer is intended to cover:

1. Manliness,
2. Good morals,
3. Recitations,
4. Presence in class, which covers regularity,
5. Physical prowess. I mean by this the careful cultivation of the body which God gives to every one of his creatures. I mean the putting on a whip-cord muscle, which will come in good play in one's future avocation, whatever it may be."

(b.) Mrs. Atkinson, wife of the Governor of West Virginia, offers a prize of twenty-five dollars in gold to the best student among the women in the University. As in the case of the prize offered by Governor Atkinson, this award is made for moral, mental and physical excellence. This prize will be awarded by the Committee on Prizes and Contests, and will be announced and presented at the Commencement in June.

Fellowships.

The Board of Regents has established ten University Fellowships, for the purpose of encouraging advanced study and promoting higher scholarship. The regulations governing them are as follows:

1. Each Fellow will be paid $300 annually, and will be excused from the payment of all University fees.

2. The Fellowships will be awarded by the President of the University to candidates for advanced degrees who are graduates of West Virginia University, or other institutions of equal grade.

3. All Fellowships will be filled each year. Fellows may be reappointed for one additional year only.

4. Candidates for Fellowships will send their applications to the President of the University, with evidences of merit, attainments, and ability, not later than May 1 each year. The appointments will be announced at Commencement.

5. Applications must be accompanied by evidences of scholarship, ability, and general worthiness, such as theses (whether prepared for this or other purposes), published writings, testimonials from instructors, outline of educational course pursued, special distinctions gained, and the like. Applications for reappointment should contain a full account of the work of the preceding year. Applications to receive attention must contain a definite statement of the special studies which the applicant intends to pursue.

6. Each Fellow will pursue his studies under the direction of

the professor or professors in charge of his special studies. Assignment of University services to each Fellow will be made by the President in consultation with the head of the department to which the Fellow has been assigned. The work assigned will be equivalent to one hour of teaching daily, or the supervision of laboratory work for one laboratory period daily.

In making appointments to these Fellowships, special weight is given to theses indicating the candidate's ability to do independent work. The candidate for a Fellowship must show proficiency already attained in the department of study in which he applies for a Fellowship. Preference will be given, in making these appointments, to those students who have taken their major work, including a thesis, in the department in which they apply, and who intend to make that subject their life work. It is very desirable that the student should have spent a year in resident study after receiving his Bachelor's degree.

Each Fellow will make to the President, at the beginning of each quarter, a written report, approved by the head of his department, indicating the courses chosen by him as a student, and the work assigned to him as an officer of the University, for the current quarter and for the previous quarter.

Discipline.

The rules and regulations which students are required to observe are few, simple and reasonable,—punctuality and regularity in attendance upon all required exercises; reasonable diligence in the performance of the work prescribed; abstinence from drinking, gambling and like gross vices; and civil, orderly conduct generally.

Students who cannot, or will not, comply with these requirements will not be allowed to remain in the University.

All matters of discipline are in charge of the Committee on Student Affairs.

Synoptic Lectures.

A system of synoptic lectures has been adopted, the purpose being to present the outlines of the leading branches taught in the University in such a way as to convey the maximum of important information in the minimum of time, so that students may become familiar with the salient features of subjects which they are unable to take up as regular studies. The synoptic lectures will be given in courses of ten lectures on each subject, one lecture per week. The hour for these lectures is 8 P. M. Tuesdays and Thursdays. To these lectures the public is invited as well as the University students in all departments. At least one course of synoptic lectures will be given each quarter, and more when possible. At the close

of each series of synoptic lectures, an examination will be held, and students who pass this examination will be given credit for one-third of a course. Students who desire to receive credit for synoptic lectures will obtain class cards for these lectures from their class officers, the same as for any other class; but students who do not desire credit, and persons not connected with the University, will be admitted to the lectures without cards.

Special Lectures.

In addition to the synoptic lectures given by members of the faculty, the University furnishes a series of public lectures by specialists from other institutions, and all students in the University are invited to attend them.

Chapel Exercises.

The regular University work of each day of the week, except Saturday, begins with Chapel exercises. These exercises consist of singing, reading the Scriptures, and prayer. The service is conducted by the Chaplain of the University, or by some one designated by him. The singing is in charge of the Director of the School of Music. In addition to these exercises, the Chaplain delivers a course of lectures each quarter on such subjects as the origin, structure, literature, history, languages, versions, institutions, personages, influences, etc., of the Bible. Students who enroll for these courses and comply with such requirements as may be prescribed by the Chaplain, are given credit for one-third of a course for each quarter. Attendance upon Chapel exercises is voluntary; but patrons of the University who wish the students under their charge to attend these exercises may have them enrolled by making such desire known to the University Chaplain.

Church Halls.

Several religious denominations have manifested an active interest in the question of establishing church halls in Morgantown for the purpose of providing homes for students during their stay in the University.

One such hall has been in operation for five years, the Episcopal Hall, founded by Rt. Rev. Geo. W. Peterkin, Bishop of West Virginia. Committees representing several other denominations have under advisement the founding of halls of a similar nature, or intended to accomplish the same purpose.

The Episcopal Hall.

The Episcopal Hall was established in 1895 by Bishop Peterkin to provide a home for young men studying for the ministry under

his direction, and for any other students of the University who may choose to reside there. He did this in preference to establishing a separate church college, which would have necessitated the duplication of the plant already established at the University. The Hall is a comfortable, home-like building of forty rooms, heated by steam and lighted by electricity, under the care of a proctor, who resides in the Hall. The primary object of the Hall is to secure for the student not only the attractive corporate side of college dormitory life, but also some of the comforts of home life.

The charge for board and room per month of thirty days is $16.00. A student may obtain the right to room alone by paying $18.00 a month.

Special Courses for Candidates for the Ministry.

In response to the suggestion of Bishop Peterkin, a short course of studies is provided for young men residing in the Episcopal Hall who are looking forward to admission to the Theological Seminary at Alexandria, Va. Though following the canonical requirements of the Episcopal Church for those desiring to be admitted candidates for priest's orders, who have not obtained a degree in Arts at some university or college, it may be found of use to others of other churches who have neither the time nor the means to take the full course leading to a degree. Young men under twenty are advised to pursue the regular classical course, which gives them a better foundation for after work, and this partial course is intended chiefly for those maturer students whose early advantages have been limited, and whose time or means are restricted. Besides the subjects mentioned here, it would be well for such students to elect as much other work as possible,—the whole course to be from one to three years in length, according to the previous preparation of the student. The outline of appointed studies is given below, the details, hours, etc., being left, so far as students in the Episcopal Hall are concerned, to the judgment of the Warden, in consultation with the different professors.

I. The English Language and Literature.

II. At least the first principles and general outlines of:
   (1) Logic.
   (2) Rhetoric.
   (3) Philosophy.
   (4) Physics.
   (5) History.
   (6) The Latin and Greek Languages

University Fees.

Except in the School of Music and in the department of Drawing and Painting, tuition is free to West Virginia students.

The tuition charged students from other states is:

$5.00 per quarter in the Preparatory School.

$5.00 per quarter in the Commercial School.

$8.00 per quarter in the College of Law.

$12.50 per quarter in the other colleges.

The matriculation fee is $5.00, payable upon entering the University by all students except cadets and those whose work is exclusively in Music or Art. Unless a student remains out of the University more than three years, the matriculation fee is paid but once by each student.

The contingent fee is $2.00 per quarter, payable at the beginning of the quarter by all students except cadets and those whose work is exclusively in Music or Art.

The diploma fee is $5.00, payable upon graduation by all students. This fee is to cover the cost of the diploma.

Students in laboratory courses in Chemistry and Anatomy pay the following fees, to cover the cost of material used:

$2.00 per quarter in General Chemistry.

$6.50 per quarter in Analytical Chemistry.

$5.00 per quarter in Anatomy.

The School of Music and the department of Drawing and Painting are partly supported by the special fees charged. These fees are moderate, and are set forth in connection with the announcements of these departments.

Board and Lodging.

Board and lodging together may be obtained in Morgantown for $3.00 per week. Most students, however, pay from $3.25 to $3.50 per week. Furnished rooms may be obtained in private families at from $1.00 to $1.25 per week. Board in students' clubs costs from $2.00 to $2.50 per week; in private families, from $2.50 to $3.00.

Estimated Expenses for a Year of Nine Months.

Room Rent	$36.00	to	$ 45.00
Board	72.00	to	108.00
Washing	9.00	to	13.00
Text-books	8.00	to	30.00
Contingent fees	6.00	to	6.00
	$131.00		$202.00

To this estimate must be added matriculation and tuition fees, in the case of students who are required to pay them, and also traveling expenses, clothing, and miscellaneous expenses, which depend largely upon the tastes and habits of individual students.

Text-books are kept for sale in the University book room, and are furnished to students at cost.

State cadets are furnished their text-books, stationery and uniforms free, and are exempt from the payment of matriculation and contingent fees.

Approved Boarding and Rooming Places.

Hereafter a committee of the faculty will have general oversight of the question of boarding and rooming, and will not only help the students to find desirable places, but will see that no student rooms or boards at an objectionable place. At present the Committee on Approved Boarding and Rooming Places consists of Professors Armstrong, Whitehill, Emory, Willey, and Friend.

Students in search of rooms or boarding places and proprietors of lodging or boarding houses are requested to confer with the members of this committee, who will prepare and publish regularly a list of approved boarding and rooming places for students.

Accredited Preparatory Schools.

The University is a part of the public school system of the state, and desires that its relations with the other parts of the system be as close and intimate as possible. The Faculty Committee on Accredited Schools consists of Professors Hodges, Miller, Woolery, Armstrong, and Barbe. Certificates from accredited schools will be accepted by the University in place of entrance examinations in preparatory subjects upon which students have passed at such schools. School superintendents, principals, or boards, desiring to have their schools placed on the accredited list, should make application to Professor Thos. E. Hodges, Chairman of the Committee on Accredited Schools, and the application will receive prompt and careful attention. Approved secondary schools outside of West Virginia will, upon application, be placed on the accredited list on the same conditions as West Virginia schools. Students who come to the University from accredited schools are required to present certificates indicating the work they have completed. These certificates must be upon a special form, copies of which may be obtained at any time upon application to the President of the University, or Chairman of the Committee. A supply should be kept constantly on hand by the Principal of each accredited school.

The list of accredited schools is at present as follows:

Allegheny Collegiate Institute,.....Alderson, W. Va.
Barboursville College,.....Barboursville, W. Va.
Broaddus Classical Institute,.....Clarksburg, W. Va.
Central Manual Training School,.....Philadelphia, Pa.
Clarksburg High School,.....Clarksburg, W. Va.
Ceredo High School,.....Ceredo, W. Va.
Davis Free School,.....Piedmont, W. Va.
Grafton High School,.....Grafton, W. Va.
Huntington High School,.....Huntington, W. Va.
Hinton High School,.....Hinton, W. Va.
Latrobe High School,.....Latrobe, Pa.
Martinsburg High School,.....Martinsburg, W. Va.
Mt. Wesley High School,.....Berkeley Springs, W. Va.
New Cumberland High School,.....New Cumberland, W. Va.
New Martinsville High School,.....New Martinsville, W. Va.
Parkersburg High School,.....Parkersburg, W. Va.
Pittsburg Central High School,.....Pittsburg, Pa.
Pittsburg Academy,.....Pittsburg, Pa.
Point Pleasant High School,.....Point Pleasant, W. Va.
Potomac Academy,.....Romney, W. Va.
Ravenswood High School,.....Ravenswood, W. Va.
Salem College,.....Salem, W. Va.
State Normal School,.....Athens, W. Va.
State Normal School,.....Fairmont, W. Va.
State Normal School,.....Glenville, W. Va.
State Normal School,.....Huntington, W. Va.
State Normal School,.....Shepherdstown, W. Va.
State Normal School,.....West Liberty, W. Va.
Steubenville High School,.....Steubenville, O.
Uniontown High School,.....Uniontown, Pa.
West Virginia Conference Seminary,.....Buckhannon, W. Va.
Wellsburg High School,.....Wellsburg, W. Va.
Wheeling High School,.....Wheeling, W. Va.

Matriculation and Registration.

Before being admitted to any class, students matriculate at the President's office, room 10, Science Hall. All students are required to register once every year.

THE UNIVERSITY LIBRARY.

Library Committee.

JEROME HALL RAYMOND, Ph.D., President of the University.
ELIZA JANE SKINNER, Librarian.
ROBERT ALLEN ARMSTRONG, A.M., Professor of English Literature.
SAMUEL B. BROWN, A.M., Professor of Geology and Mineralogy.
RICHARD ELLSWORTH FAST, LL.B., A.M., Professor of American History and Political Science.
JAMES DAVID THOMPSON, A.M., M.S., Assistant Professor of Mathematics.

Library Staff.

ELIZA JANE SKINNER, Librarian.
ANNA BANCROFT WHITE, A.B., Assistant.
WILLIAM WINFRED SMITH, Assistant

Library and Reading Room.

The Library is open throughout the year from 7:45 A. M. to 10 P. M., every day except Sunday and the legal holidays,—Fourth of July, Thanksgiving Day, Christmas Day, and New Years Day. On Sunday the Library is open for reading and the consultation of books from 2 P. M. to 5 P. M. No books are given out on Sunday.

All officers and students in all departments of the University have free access to the Library, and may draw books for home use. Two volumes may be take out at a time and retained for two weeks. Upon request of instructors, books used as collateral reading in University courses are reserved for use in the Library.

Students have free access to the shelves, and are urged to avail themselves of the opportunity thus offered to become familiar with the standard works in each department of learning.

The Library may be consulted by all persons, whether connected with the University or not, and, under special regulations, the privilege of borrowing books is extended to those not connected with the University.

The Library is classified by the Dewey decimal system of classification. A temporary author list and a card shelf list are of great asistance in the regular work of the Library during the slow process of the making of the card catalogue.

The Library contains about 15,000 volumes, exclusive of unbound pamphlets and duplicates. Of this number, 2,000 volumes have been added during the past year.

By classes the number of bound volumes is as follows:

General Works	850
Philosophy	300
Religion	550
Sociology	2,000
Philology	250
Natural Science	1,800
Useful Arts	1,300
Fine Arts	250
Literature	2,900
History (including Biography)	2,300
Government publications	2,500

Bibliographic aids have been added, and the attendants in charge are ready at all times to give assistance in research and investigation. The value to the University student of a knowledge of the proper use of books is inestimable. It is the aim to develop this line of instruction, and to make the Library the attractive working center of the University.

The reading room occupies a part of the room devoted to the Library, and is provided with the current newspapers and periodicals, both general and technical. The periodical list includes about one hundred and fifty of the best magazines and papers, and the leading county papers of the state. The room is well lighted, and is free to all who care to use it.

The University has no greater need than that of a new Library building. An appropriation for this purpose was made by the last Legislature, and plans for a new building have been approved.

THE COLLEGE OF ARTS AND SCIENCES.

Staff of Instruction.

JEROME HALL RAYMOND, Ph.D., President of the University, and Professor of Economics and Sociology.

POWELL BENTON REYNOLDS, D.D., Chaplain of the University, and Professor of Philosophy.

ALEXANDER REID WHITEHILL, Ph.D., Professor of Chemistry.

JAMES WILLIAM HARTIGAN, A.M., M.D., Professor of Biology.

SAMUEL B. BROWN, A.M., Professor of Geology and Mineralogy.

ROBERT ALLEN ARMSTRONG, A.M., Professor of English Literature.

THOMAS CONDIT MILLER, A.M., Professor of Pedagogy.

JAMES SCOTT STEWART, M.S., Professor of Mathematics.

ROBERT WILLIAM DOUTHAT, Ph.D., Professor of the Latin Language and Literature.

THOMAS EDWARD HODGES, A.M., Professor of Physics.

LEWIS CASS WOOLERY, A.M., Professor of the Greek Language and Literature.

RICHARD ELLSWORTH FAST, LL.B., Ph.B., Professor of American History and Political Science.

FREDERICK WILSON TRUSCOTT, Ph.D., Professor of Germanic Languages and Literatures.

KENNETH McKENZIE, Ph.D., Professor of Romance Languages and Literatures.

CHARLES HENRY PATTERSON, A.M., Professor of Rhetoric and Elocution.

JAMES MADISON BURNS, U. S. A., Professor of Military Science and Tactics, and Commandant of Cadets.

LUCY CELESTE DANIELS, Ph.M., Associate Professor of European History.

OTTO FOLIN, Ph.D., Assistant Professor of Physiological Chemistry.

EDWIN BINGHAM COPELAND, Ph.D., Assistant Professor of Botany.

HANNAH BELLE CLARK, Ph.D., Assistant Professor of Domestic Science, and Dean of Women.

JOHN BLACK JOHNSTON, Ph.D., Assistant Professor of Zoölogy.

JOSEPH WILLIAM CARR, Ph.D., Instructor in German.

DANIEL WEBSTER OHERN, A.M., Assistant in Greek.

SIMEON CONANT SMITH, A.B., Assistant in Rhetoric and Elocution.

EDWARD MONTOULIEU Y DE LA TORRE, A.B., Assistant in Spanish.

ROBERT MORRIS, A.B., LL.B., Fellow in Economics.

CHARLES FENTON HOLDEN, Ph.B., Fellow in English Literature.

CHARLES CLEAR BALLARD, A.B., Fellow in Romance Languages.

ALLEN WILSON PORTERFIELD, A.B., Fellow in German.

ELEANOR BROWN MORELAND, A.B., Fellow in Domestic Science.

WILLIAM HENRY WHITHAM, B.S., Fellow in Physics.

Conditions of Admission.

Candidates for admission must present certificates of good moral character, and if from other colleges or universities must bring letters of honorable dismissal.

Entrance Subjects and Requirements.

For meeting the requirements for admission to the Freshman Class candidates are offered a choice of seventy-seven courses in thirty subjects. A "course" represents the amount of work done by a class meeting five times a week for one quarter (twelve weeks). The entrance subjects are all reduced to the unit of a course, and placed on exact equality. Thirty-nine courses will be accepted for admission in full standing, and these may be selected by the candidate from among the following seventy-seven courses:

1.	English Grammar,	2 courses;
2.	English Composition and Rhetoric,	5 courses;
3.	English Literature,	2 courses;
4.	Latin,	9 courses;
5.	Greek,	6 courses;
6.	French,	6 courses;

7.	German,	9 courses;
8.	Greek History,	1 course;
9.	Roman History,	1 course;
10.	Mediaeval History,	1 course;
11.	Modern History,	1 course;
12.	English History,	1 course;
13.	American History,	1 course;
14.	Civil Government,	1 course;
15.	Arithmetic,	1 course;
16.	Elementary Algebra,	3 courses;
17.	Plane Geometry,	2 courses;
18.	Plane Trigonometry,	1 course;
19.	Advanced Algebra,	1 course;
20.	Solid Geometry,	1 course;
21.	Botany,	2 courses;
22.	Physics,	2 courses;
23.	Chemistry,	3 courses;
24.	Zoölogy,	3 courses;
25.	Physical Geography,	1 course;
26.	Physiology,	1 course;
27.	Astronomy,	1 course;
28.	Drawing,	3 courses;
29.	Mechanic Arts,	3 courses;
30.	Military Science,	3 courses.

Not more than one course in Botany, Physics, Chemistry, or Zoölogy will be accepted for admission unless the work has been accompanied by laboratory or field work.

Entrance Examinations.

The schedule of entrance examinations for the year 1900-1 is as follows:

Monday, September 17, 1900.

8:00 A. M., English Grammar;
English Composition and Rhetoric;
English Literature;

9:00 A. M., Latin;

10:00 A. M., Greek;

11:00 A. M., French;

2:00 P. M., German;

3:00 P. M., Greek History;

4:00 P. M., Roman History;

5:00 P. M., Mediaeval History.

Tuesday, September 18, 1900.

8:00 A. M., Modern History;
9:00 A. M., English History;
10:00 A. M., American History;
11:00 A. M., Civil Government;
2:00 P. M., Arithmetic;
3:00 P. M., Algebra;
4:00 P. M., Geometry;
5:00 P. M., Plane Trigonometry.

Wednesday, September 19, 1900.

8:00 A. M., Botany;
9:00 A. M., Physics;
10:00 A. M., Chemistry;
11:00 A. M., Zoölogy;
2:00 P. M., Physical Geography;
3:00 P. M., Physiology;
4:00 P. M., Astronomy;
5:00 P. M., Drawing.

The Committee on Admission and Advanced Standing will not issue cards for special entrance examinations after the dates set for regular examinations at the beginning of the Fall Quarter until the applicant presents to the committee the Treasurer's receipt for a fee of two dollars for such special entrance examination.

Admission on Certificate.

Students who have completed thirty-nine of the above courses in any of the West Virginia State Normal Schools, or any of the other schools that are accredited by the Faculty Committee on Accredited Schools, will be admitted without examination, and permitted to enter upon such undergraduate work as their preparatory studies contemplated, provided they bring with them properly certified statements from their previous instructors regarding the work they have done. These statements must be passed upon by the Faculty Committee on Admission and Advanced Standing.

As no student, with the exception of a student over twenty-one years of age, is admitted to the University, or Preparatory School, except to the first class in the Preparatory School, in any other way than by examination or certificate, students intending to enter the University on certificate will insure immediate admission to their classes by bringing credentials that state in full the courses pursued, the number of weeks given to each course, the number of recitations a week, and the length of each recitation period. Blank sheets for this purpose will be furnished on application to the President.

Especial attention is called to the fact that students who come

without credentials and do not take the entrance examinations can be classified only in the first year of the Preparatory course, and cannot be admitted to any but Preparatory classes, taking the first course in each subject.

Degrees.

Honorary Degrees.

No honorary degrees are conferred.

Bachelor of Arts.

The degree of Bachelor of Arts will be conferred upon any student who satisfies all entrance requirements and satisfactorily completes forty-two college courses, of which at least ten courses (including a thesis) are in some one department of study, selected by the student as his major subject or specialty. The professor in charge of the student's major work will act as the student's class officer and adviser, and will have authority to require the completion of the major subject and also such minor subjects in other departments as he may consider necessary or advisable collateral work; but such minor requirements will not exceed six courses. With the exception of these major and minor courses, all work is elective, and the student may, in consultation with his major professor, freely choose any subject taught in the University which his previous studies have prepared him to undertake; but the recommendation of his major professor is necessary to graduation; and no degree will be conferred upon any student who has not received credit for at least forty-two full college courses, and spent at least one University year (three quarters) in resident study at this University.

A student may elect Law as his major, but may not take more than ten courses (including a thesis) in Law to count toward the degree of B.A. A student who has received credit for nine (or, including a thesis, ten) courses in Law before receiving the degree of B.A. may finish the remainder of the Law course, and receive the degree of LL.B. by an additional year's work in Law, provided that in that time he is able to take all of the remaining courses required for the degree of LL.B.

A student may elect Agriculture or Engineering as his major, under similar conditions.

Master of Arts.

Persons wishing to become candidates for the Master's degree must have received the Bachelor's degree from this University or from one of equal standing. After fulfilling all the requirements satisfactorily, candidates will receive the degree of Master of Arts;

but those who have received the Bachelor's degree in Science may, if they prefer, receive the degree of Master of Science.

The requirements for the degree are (1) at least two terms of graduate study in residence at this University; (2) ten courses, of which one shall be a thesis. At least three courses and the thesis must be taken in one department as the major subject; and the whole course of study must be approved by the Committee on Graduate Study. Credit toward the Master's degree will not be given for more than two courses taken before all requirements for the Bachelor's degree have been fulfilled.

University fellows who teach three or more courses in their major subject will receive credit therefor to the amount of one course toward the Master's degree.

Doctor of Philosophy.

I. Prerequisites.

1. Persons wishing to become candidates for the degree of Ph.D. must present to the Committee on Graduate Study evidence that they have received the Bachelor's degree from this University or from one of equal standing.

2. A working knowledge of French and German is required of all candidates.

II. Conditions of Candidacy.

1. It is expected that the work for the degree of Ph.D. will require at least three years. Candidates must spend at least two years of graduate study in residence at some University, of which at least one year must be at this University. The requirements of time are, however, wholly secondary. The degree will not be given for the mere reason of work for a prescribed time, nor for miscellaneous studies, but only on the ground of long study and high attainments in some special branch of learning.

2. Candidates will choose one major subject and one minor subject; and to the latter they will devote not more than one-third of their time. Their work will be carried on with the approval and under the general direction of the Committee on Graduate Study.

III. Theses.

1. Not less than two months before the date on which the candidate expects to receive the degree, he must present to the Committee on Graduate Study a formal dissertation on a subject approved by his major professor at least seven months before.

2. The thesis shall give evidence of the candidate's ability to make original research and shall in itself be a contribution to scholarship or scientific knowledge.

3. The thesis must be in suitable literary form; although for acceptance it will depend chiefly on its subject matter.

4. The thesis shall be examined by three persons appointed by the Committee on Graduate Study; and shall be defended by the candidate before this Committee.

5. If the thesis is accepted, the candidate will be admitted to examination.

6. If the candidate passes satisfactorily the prescribed examinations, he shall, prior to receiving the degree, deposit with the Librarian of the University a typewritten or a printed copy of the thesis.

7. The publication of the thesis is regarded as a part of the evidence of the candidate's fitness to receive the degree. If the thesis cannot be published before the conferring of the degree, the candidate must either furnish the Committee on Graduate Study evidence of completed arrangements for publication, or deposit with the Treasurer of the University a sum sufficient to cover the cost of publication in approved form. When the thesis is published, twenty-five copies shall be presented to the University Library, and the deposit made with the Treasurer will be returned.

IV. Examination.

1. The examination shall be both written and oral, and shall be conducted by the professor in charge of the candidate's work; the written privately, the oral in the presence of the Committee on Graduate Study.

V. Conferring of Degrees.

1. Candidates who meet these requirements satisfactorily will be recommended by the Committee on Graduate Study to the Board of Regents for the degree of Doctor of Philosophy.

VI. Departments of Study.

1. Candidates may choose their major subjects from the following departments: Philosophy; Economics and Sociology; History and Political Science; Greek; Latin; Romance Languages; Germanic Languages; English; Mathematics and Physical Science; Chemistry; Geology and Mineralogy; Botany; Zoölogy.

Special Rules and Regulations.

Classification and Promotion.

1. No student shall be classified as a Freshman who is conditioned in more than three Preparatory courses.

2. No student shall be classified beyond the Freshman Class until all Preparatory conditions are removed.

3. No student shall be classified as a Sophomore who has not received credit for at least seven and a half college courses.

4. No student shall be classified as a Junior until he has received credit for at least nineteen college courses.

5. No student shall be classified as a Senior until he has received credit for at least thirty college courses.

Removal of Conditions.

It shall be the duty of every college Class Officer to assign to his students who may have Preparatory conditions, the work necessary to remove those conditions before making assignments of college work.

Maximum Work.

Students who are carrying four full courses, in accordance with the regular rule or by special permission of the Committee on Registration, shall not receive credit for fractional courses in addition thereto; provided, however, that any student may receive credit for the fractional courses offered in Chapel Lectures, or Military or Physical Training Departments, in addition to his other work.

Grades and Standing.

1. Every Class Officer shall, immediately after the end of every quarter, report in writing to the Committee on Scholarship the name of every student under his charge, if any, who has failed to attain the minimum average grade required by the rules of the Faculty, together with a list of the studies pursued by each student during the quarter, the grades attained in each, and the conditions in each study, if any.

2. Any cadet, who upon the aggregate of all his studies during any quarter, shall fail to attain the minimum average of seventy upon a scale of one hundred, shall forfeit his cadetship; but such forfeiture may be relieved by order of the Committee on Scholarship for good cause shown.

3. Any student, who upon the aggregate of all his studies during any quarter, shall fail to attain the minimum average grade of sixty upon a scale of one hundred, shall be suspended from the University for such time as the Committee on Scholarship may designate; but such suspension may be relieved by order of the Committee for good cause shown.

4. It shall be the duty of every instructor to report to his Class Officer the name of any student who does not appear to be doing satisfactory work in his classes, on or before the end of the first half of any quarter; and such Class Officer so notified shall consult with such student under his charge and shall take such measures as to

him may seem practicable to secure from the student a better grade of work.

5. In case of a student failing to report to classes promptly at the beginning of a quarter, the following rule shall apply:

For less than one week's absence there shall be a deduction from the student's average standing of two per cent. for each exercise missed; for absence of one week or more there shall be a deduction of one-sixth of the credit in that course for the quarter for each week missed; such deduction in standing or credit to be made by the instructor.

Provided, that in case of new students, the deduction in course credit only shall be made.

Advanced Standing.

Students from approved colleges bringing certificates of work and standing will be admitted without examination. In determining their position in the University, however, the work presented will be measured by the standards and courses of this University.

Students who have pursued studies beyond those required for admission, but not in approved colleges, may be admitted to advanced standing by passing examinations in the studies for which they ask advanced standing.

Committee on Admission and Advanced Standing.

The Committee on Admission and Advanced Standing consists of Professors Patterson, Hodges, Hare, Truscott, and Daniels. The duty of this Committee is to determine the value of credits submitted by candidates for admission or advanced standing. This Committee refers all candidates who ask for credit by examination to the instructor in the study for which credit is asked. The instructor will set an examination for such candidates and report the result to the Committee who will in turn report it to the President of the University. This Committee determines all questions as to the recognition of work done in other institutions. See pages 46 and 47.

Quarterly Examinations.

Beginning July 1, 1900, the schedule of examinations at the close of each quarter will be as follows:

8 o'clock classes, Thursday, 8:00 A. M.;
9 o'clock classes, Friday, 8 A. M.;
10 o'clock classes, Saturday, 8 A. M.;
11 o'clock classes, Thursday, 2 P. M.;
12 o'clock classes, Friday, 2 P. M.;
Afternoon classes, Saturday, 2 P. M.

DEPARTMENTS OF INSTRUCTION.

In the following announcements, unless otherwise noted, each course described is a full course, the class meeting five times a week, Mondays to Fridays inclusive, through one entire quarter. The quarter during which the course is given, as well as the hour and class-room, are named, whenever possible, at the end of the announcement of each course. When a course is given more than once during the year, each quarter in which it is given is named. Where the quarter is named, but not the year, it is expected that the course will be given every year during the quarter named. Where the year as well as the quarter is named the course will not be given until the year named. Where the announcement of the course is not followed by the name of the instructor it is expected that the class will be conducted by the head of the department. All courses are designated by the name of the department and the number of the particular course. Thus the first course in Psychology is known as "Philosophy 1;" the course in Dynamos and Motors is known as "Physics 10," etc. The abbreviations used are: U., University Hall; S., Science Hall; M., Martin Hall; C., Commencement Hall; A., Agricultural Experiment Station.

Philosophy.

Professor Reynolds.

1. **Psychology.** An introductory course devoted to the study of the states of consciousness and mental processes, with an outline of the structure and functions of the nervous system, and the principles and methods of mental training and the application of Psychology to education. Recitations with lectures and notes by the instructor. Fall, 8:00; 23 S.

2. **Logic and Principles of Science.** A study of the processes of conception, judgment and reasoning; nature and laws of experience; induction and the subsidiary processes, such as observation, experiment, classification, and hypothesis; inductive methods; imperfect inductions and fallacies; elements of deduction and formal logic. Recitations, lectures and notes by the instructor, and references to standard authorities. Winter, 8:00; 23 S.

3. **Comparative Psychology.** An outline of physiological

psychology; a study of the phases, conditions and progress of mental phenomena and activities, from the lowest to the highest grades in both animals and man. Lectures, recitations and collateral reading. Open to those who have taken Course 1, or its equivalent.

Spring, 8:00; 23 S.

4. **Ethics.** A review of the mental processes that control conduct; fundamentals of morality, the moral faculty, ground of obligation, moral standard, moral law, moral sanction; moral culture; practical morality, personal and social duties. Recitations and notes by the instructor. Fall, 10:00; 23 S.

5. **Comparative Ethics.** An outline of the leading ethical systems. Lectures and collateral reading. Winter, 1902.

6. **Applied Ethics.** A study of the relation of ethics to religion, politics, economics and individual and social culture. Lectures, recitations and collateral reading. Winter, 10:00; 23 S.

7. **Comparative Religion.** An outline of the history of the leading religions of the world, and a comparison of the beliefs, forms, practices and influences of the different religions. Recitations, lectures and collateral reading. Spring, 10:00; 23 S.

8. **History of Philosophy.** An introduction to the study of Philosophy, with an outline of the history of the leading philosophers and schools, ancient, mediaeval, and modern. Lectures, with references to best standard works. Fall, 12:00; 23 S.

9. **The Philosophy of the Renaissance.** A special study of the transition from mediaeval to modern philosophy, the struggle against theological domination and the rise of the natural sciences. Lectures, recitations and collateral reading. Winter, 12:00; 23 S.

10. **The Theory of Evolution.** An outline of the history, content, phases, and influence of the theory of evolution. Lectures, recitations and collateral readings. Spring, 12:00; 23 S.

11. **German Philosophy.** Winter, 1902.

12. **Mediaeval Philosophy.** Especially the influence of Christianity upon philosophy and vice versa, and the rise and content of Patristic philosophy. Spring, 1902.

Physiological Phychology.

Professor Scripture and Mr. McAllister.

1. **Physiological and Experimental Psychology.** One hour daily through the quarter. A series of lectures and demonstrations. Text-books: Ladd's "Outlines of Physiological Psychology," Scripture's "New Psychology." Summer, 1900. Hour to be arranged.

2. **Psychology of Expression (Gesture, Speech, Music).** One hour daily until July 20. A series of lectures on the expression of

thought and emotion as shown in facial expression, in gesture, in rhythmic movements, in prose and poetical speech and musical rhythm. Summer, 1900. Hour to be arranged.

3. **Educational Psychology.** One hour daily from July 23 to September 1. Application of modern psychological principles to educational subjects; outlines of the psychology of touch, its use in education; motor abilities, accuracy of movement; fundamental principles of writing and drawing; sight, color-teaching; space, form-teaching, drawing, modeling; attention, concentration and distraction, laws for developing attention; memory, analysis into its components, experimental study of, calculation of results, development and training, time of study; imagination, use, necessity of development and repression, fables, children's books, toys; emotions, will, action, reflex, automatic, instinctive, voluntary, their training; education of the blind, the deaf and other defectives; child study, principles of anthropometry and psychometry; psychological development of the child, beginnings of instruction; economy in education, greatest results from least efforts, correlation and concentration of instruction; various educational subjects from a psychological standpoint,—amusement, play, toys, picture books, object-lessons, etc. The course is illustrated with experiments, lantern views, and a collection of educational material. Courses 2 and 3 will together count as one full course.

Summer, 1900. Hour to be arranged.

4. **Laboratory Practice.** Two hours daily. A series of practical exercises in experimenting. Summer, 1900.

Pedagogy.

Professor Miller.

1. (a). **Education in West Virginia.** Early schools in this Trans-Allegheny region. Introduction of the Free School system. University and Normal School organization. Discussion of the Irreducible School Fund, the General Fund, the Independent District, Town and City Schools, the County as a unit of taxation, the Central High School, etc. Morgan and Cork's History, with extensive collateral reading.

(b). **Education in the United States.** Dr. R. G. Boone.

Summer, Fall, 8:00.

2. **History of Education.** Development of educational ideas from early periods to the present time. Comparative review of different systems and methods, with especial emphasis upon recent progress. Seeley's "History of Education," with Compayre, Painter and "The Great Didactic" as references. Winter, 8:00.

3. **Educational Psychology.** The human faculties, their laws of development; the relation between Psychology and Pedagogy;

physical basis of education; laws of association and apperception; the feelings and the will; conception, judgment, and reason; character-building. White's "Elements of Pedagogy;" McClellan's "Applied Psychology." Spring, 8:00.

4. **School Organization and Management.** This course will include grading and classifying schools, courses of study, use of text-books, discipline, examinations, proper incentives, school ethics, and many other features of practical pedagogics. "State Manual" and Raub's "School Management," supplemented by lectures, papers, and discussions. Fall, 9:00; Summer, 10:00.

5. **The Science of Education.** Educational theory; the basis of school systems and methods; "What knowledge is of most worth?" Educational values; the practical, the disciplinary, the culture value. Recitations, discussions, lectures and essays. Payne's "Contributions to the Science of Education;" Hinsdale's "Studies in Education." Winter, 9:00; Summer, 11:00.

6. **Methods of Instruction.** The art and science of teaching; general methods, special methods; school-room practice; the recitation and the written exercise; elementary science teaching in secondary schools; the teaching of History, English and Mathematics. Discussions, readings, critiques. De Garmo's "Essentials of Method;" Putnam's "Manual of Pedagogics."

Summer, Spring, 9:00.

7. **Educational Epochs and Reformers.** Pestalozzi, Froebel, Rousseau, Herbart, Horace Mann, Spencer, Rein, W. T. Harris, and Stanley Hall. No great movement can be thoroughly understood until we study the conditions which lead to its development. Educational history is the history of ideas. The life and work of a reformer is a benediction upon the ages that follow. Biographies, critiques, and lectures. Quick's "Educational Reformers;" The Great Educator Series, Winship's "Horace Mann," and other literature of the subject. Fall, 11:00.

8. **School Buildings and Sanitation.** Location of buildings, school grounds, lighting, heating, ventilation, sewerage, furniture, apparatus, and equipment. Illustrations of modern school architecture. Discussions and investigation with reference to the best conditions for district and city schools. A very important course for superintendents and school officers. The general literature of the subject found in the pedagogical library will be studied.

Winter, 11:00.

9. **School Supervision.** State, county, city and district supervision. The relation of the superintendent to parents and patrons, to the Board and to his teachers; his authority and his moral influence in the community; school visitation and discipline; teachers'

meetings, school reports, and general administrative duties. Payne and Pickard on Supervision. Spring, 11:00.

20. Seminary. Discussion of current educational topics and various features of pedagogical science; child study, and original investigation by laboratory methods, as far as such investigation is possible with the means at command.

Half course each quarter. 10 M.

Sociology.

President Raymond and Assistant Professor Clark.

1. Anthropology. An elementary course on man as the unit of society, and on the evolution of society and social institutions. The general purpose of the course is to point out how man has developed into his present social state, what the influences were which caused this development, and how these influences themselves have evolved. The general subjects discussed are: first, the antiquity of man, and the place man occupies in nature; second, the origin and early development of institutions which have made man what he is, and upon which contemporary society is based, such as language and writing, the arts of life and of pleasure, religion and science, mythology and history, the family and social structure. Tylor's "Anthropology," supplemented by lectures and assigned readings.

Summer, Fall, 8:00; 10 S.

2. Ethnology. A course on the races of mankind, with special reference to the social institutions of various peoples. The physical and mental differences of races are discussed; the various peoples of the world are classified; and the most important ethnographic problems are considered. Keane's "Ethnology" is used by the class, supplemented by lectures and the investigation of assigned topics. Prerequisite, Anthropology. Winter, 8:00; 10 S.

3. Elements of Sociology. A course on the structure and functions of contemporary society. Existing society is studied as an objective reality, the student's own world being his laboratory. The course begins with a series of elementary lectures on the methods of scientific social study; the relation of the individual to society; the social organism; the physical and psychical bases of society; the social forces; the field of sociology and its relation to social reform. Meanwhile the individual members of the class have been assigned certain social institutions for personal observation and study, upon which they report fully in the class. The purpose is to bring out prominently the leading features in the associated life of human beings as it actually exists. Lectures, assigned readings and reports. Prerequisites, Anthropology and Economics 1 and 2.

Spring, 8:00; 10 S.

4. **A Historical Survey of Sociological Thought.** This course traces the gradual development of sociological thought from antiquity through the Hebrew, Greek, Roman, and mediaeval writers down to our own times. The sociological teachings of a few classical writers, as Plato, Aristotle, and Cicero, are considered as types of ancient sociological thought. Mediaeval thought is briefly discussed, taking writers like St. Augustine and St. Thomas Aquinas as types, with a view to explaining the slow growth of Sociology. The later developments of sociological thought are treated at greater length, the larger part of the course being devoted to the teachings of the most important modern sociologists. Lectures and assigned readings. Prerequisite, Sociology 3. Summer, 8:00; 10 S.

5. **Contemporary Charities.** The causes and conditions of poverty, methods of relief, historical and contemporary; special classes, children, the aged, unemployed, defective; charity organization. Warner's "American Charities." Lectures, research work.

Assistant Professor Clark. Fall, 9:00.

6. **The Treatment of Delinquents.** Causes of crime, criminal anthropology, history of methods of treatment, preventive measures, juvenile delinquents, legal factors. Lectures and assigned topics.

Assistant Professor Clark. Winter, 9:00.

7. **Social Movements of the Nineteenth Century.** A study of organized efforts for social betterment, their principles and results. This includes the investigation of movements affecting every phase of social life, hygienic, economic, artistic, educational, religious. Lectures, readings, and the development of assigned topics.

Assistant Professor Clark. Spring, 9:00.

8. **The Family.** The historical development of the family: its significance as a social institution; its organization; pathological conditions and suggested remedies for these. Inductive studies, lectures and library work.

Assistant Professor Clark. Winter, 11:00.

Economics.

President Raymond, Professor Carver, and Mr. Morris.

1. **Historical Introduction to Economics.** A course in Economic History, designed to furnish a basis for the study of economic principles. The aim is to familiarize the student with the main facts in the development of modern industrial society before he begins to theorize about them. Gibbins' "Industrial History of England" will be used as a guide with supplementary assigned readings.

Fall, 9:00.

2. **Principles of Economics.** An exposition of the fundamental laws of Political Economy. This is an elementary course, prerequi-

site to all advanced work in Economics. Ely's "Outlines of Economics," supplemented by lectures and assigned readings in the library. Summer, Winter, 9:00; 10 S.

3. History of Economic Thought. A sketch of the development of the Science of Economics, from the Greeks to the present day. The different schools of economic thought are considered, and special attention is given to the views of the so-called classical economists,—Adam Smith, Malthus, Ricardo, and John Stuart Mill. Ingram's "History of Political Economy," supplemented by assigned readings from the works of the authors studied. Prerequisite, Economics 2. Spring, 9:00.

4. Money and Banking. This course explains the nature and functions of money, and traces its historical evolution; the different views as to the relation between the money supply, or the monetary policy of government, and the stability of prices, between the money supply and commercial prosperity, and their relation to the question of the obligations between debtor and creditor. The theories of bimetallism, monometallism, independent free coinage and paper fiat money will be examined, and several contemporaneous types of banking systems will be studied, including the scheme for a postal savings bank. Prerequisite, Economics 2.

Mr. Morris. Fall, 10:00.

5. Public Finance, with special reference to the financial history and conditions of the United States. The subjects considered are:

(a) Purposes of public expenditures; a brief comparison and criticism of the expenditures of leading cities and countries.

(b) An historical comparative and critical study of the theory and methods of taxation; a comparison of systems of taxation in different countries; the sources of public revenue; comparison of the merits of different kinds of taxes, particularly of taxes on property, on the manufacture and sale of commodities, on imports, on incomes, on inheritances, and on franchises; Henry George's theory; equalization of taxation. A brief summary of the important legal principles of taxation as shown by leading state and federal cases.

(c) A comparison of the public debts of leading cities and countries, and a consideration of their economic aspects. Prerequisite, Economics 2. Mr. Morris. Winter, 10:00.

6. Practical Economic Problems. A study of proposed schemes of social reform and methods of social improvement. Trades unions, building and loan associations, insurance associations, profit sharing and co-operation. Relation of the state and the municipalities to monopolies. History of the socialistic movement and a discussion

of the principles of socialism. The economic influence of education and Christianity. Prerequisite, Economics 2.

Mr. Morris. Spring, 10:00.

7. **The Distribution of Wealth.** A study of the modern distributive process and of the factors which determine the shares in distribution. The course naturally begins with a study of theories of value, followed by a study of theories of rent, interest, wages, profits, etc. In the constructive part of the course, the purpose will be to show how the law of variation observed in the phenomena of value may be traced in the processes which determine the shares in the products of industry. Lectures and assigned reading to be reported on in class. Professor Carver. Summer, 10:00.

8. **Methods of Social Reform.** A study of the fundamental characteristics of industrial society and an examination of the proposed plans of social regeneration: 1. Those which propose the reconstruction of society on a fundamentally different basis from the present; 2. Those which are merely palliative in their aims and tendencies; 3. Those which propose the progressive improvement and perfection of society without destroying its present foundations. Lectures and library work. Professor Carver. Summer, 11:00.

9. **Economic Legislation.** In this course each student is expected to study one concrete problem thoroughly, and to present to the class a bill drawn up as if for legislative enactment. Upon presentation, each bill is to be criticised and the framer is to defend it against all comers. After thorough criticism and discussion a vote of the class is taken. Among the subjects so treated will be Trusts, Railway Pooling, Banking, the Standard of Value, Employer's Liability, Factory Inspection, Tramps, Strikes, etc.

Professor Carver. Summer, 12:00.

Political Science.

Professor Fast.

1. **Civil Government in the United States.** A course with special reference to the origin of types of local government in the United States, embracing an outline of state and federal government. Two pieces of written work, prepared from material in the library, will be required: (a) A phase of colonial government; (b) a phase of local government. Required for admission to all other courses in Political Science. No credit will be given upon any college degree. Spring, 10:00; 6 M.

2. **The Federal Government of the United States.** A study of the workings of the government and politics of the United States, including a summary of government in general with reference to American conditions. There will be lectures, readings from references, and three special pieces of written work: (a) A study of

political methods; (b) the actual workings of some department of the national government; (c) the actual workings of some part of a state or municipal government. Prerequisites, Political Science 1, or American History 21, 22, or 23. Bryce's "The American Commonwealth;" Hart's "Revised Suggestions." Fall, 10:00; 6 M.

3. **Comparative Constitutional Government.** A comparative study of Greek, Roman, and Teutonic polity, of the constitutions of Great Britain, France, Germany, Switzerland, and other leading states of the world, and of the trend in the development of constitutional government. Open to advanced students only. Woodrow Wilson's "The State." Winter, 10:00; 6 M.

4. **Diplomatic History of the United States.** The treaty relations of the United States with foreign powers are studied in detail, including an examination of documents and methods. Prerequisites, American History 21, 22, and 23. Spring, 11:00; 6 M.

20. **Seminary in Politics.** This course is intended for advanced students, and consists of the special study of selected topics. Credit will be given in proportion to the work accomplished.

Fall, Winter, Spring, 4:00 to 6:00; 6 M.

Law.

Professors Johnson, Brooke, and Willey.

1. **Blackstone.** The Common Law is studied from the text of Blackstone's "Commentaries," supplemented by lectures, with references to American decisions and statutes.

Professor Brooke. Fall, 8:00; 11 U.

2. **Blackstone.** A continuation of Course 1.

Professor Brooke. Winter, 8:00; 11 U.

3. **Blackstone.** A continuation of Course 2.

Professor Brooke. Spring, 8:00; 11 U.

4. **Elements of International Law.** Lectures are supplemented by the study of leading cases.

Professor Johnson. Spring, 8:00; 14 U.

5. **Constitutional Law.** This course will examine the leading principles established by the decisions of the Supreme Court. Lectures with references to the "Commentaries" of Story, Kent, and Cooley. Professor Johnson. Winter, 9:00. 14 U.

6. **Civil and Criminal Evidence.**

Professor Willey. Spring, 9:00; 15 U.

7. **Parliamentary Law.** No College credit is given for this course.

Professor Johnson. Half course. Last six weeks, Fall, 11:00; 14 U.

Courses 1 to 7 are the same as those announced under the same names by the College of Law.

History.

Professor Fast and Associate Professor Daniels.

For introductory courses in History, see the Preparatory Department announcements.

7. **History of Greece.** This course will trace the history of Greece from the beginning of the Persian wars to the Roman conquest. The mythology of the Greeks, the contributions of earlier nations to the Greek civilization, and the constitutional development of the pre-Persian period, will be treated in preliminary lectures. The student will also be given, by means of lectures and collateral reading, some acquaintance with the literature, philosophy, and art of the Greeks.

Associate Professor Daniels. Summer, 11:00; 4 M.

8. **History of Rome.** In this course a brief outline will be given of the development of the Roman republic previous to the second century. In tracing the subsequent history of the republic, the following topics will receive special attention: the agrarian question; the development of the Roman provincial system; the influence of Hellenism; the development of the popular and conservative parties, and the party struggles to the death of Ceasar. In the history of the empire, the following topics will be considered: the organization of the empire; Roman citizenship; provincial government; the army; the rise of Christianity; economic conditions; the frontiers, and the contact of the empire with barbarians.

Associate Professor Daniels. Winter, 11:00; 4 M.

9. **Mediaeval History: The Rule of the Teutons.** In this course an attempt is made, first, to picture the conditions of the Roman Empire in the fourth, fifth, and sixth centuries of the Christian era; next, to present the primitive life and institutions of our Teutonic ancestors; and then, with the career of the Frankish tribes as the central thread of the story, the history of Catholic Christian Europe down to the Renaissance is studied.

Associate Professor Daniels. Spring, 1900 and 1902, 11:00; 4. M.

10. **Modern History.** This course begins with the Renaissance and brings the history of European civilization down to our own day, treating of the development of art, literature, and science; the extension of commerce and maritime adventure and the colonization of the new world; the reformation in religion, philosophy and education; the culmination of political absolutism, and the succeeding political revolution; the industrial revolution which ushered in the present century; and the new outlook upon life which results from present political, religious, and economic conditions and intellectual culture. Associate Professor Daniels. Spring, 1901, 11:00; 4 M.

11. **History of English Political Institutions.** In this course a study will be made of the development of English political institutions under the following general heads: Anglo-Saxon institutions; feudal development in the pre-Norman and Norman periods; the administrative system under the Norman and Plantagenet kings; the development of the representative system in the thirteenth century, the increase in Parliamentary powers in the fourteenth century, and the causes of decline in the fifteenth century.

Associate Professor Daniels. Fall, 1901, 12:00; 4 M.

12. **History of English Political Institutions.** A continuation of Course 11. The topics to be considered are: the causes and character of the Tudor absolutism; the revival of parliamentary independence in the latter half of the sixteenth century; the struggle between king and parliament under the Stuarts; the Revolution of 1688 and the settlement following; the development of ministerial government, and the relation between England and her colonies. Associate Professor Daniels. Winter, 1902, 12:00; 4 M.

13. **History of Germany.** An outline study of German history from the Treaty of Verdun to the present time, with a preliminary sketch of primitive Germanic institutions.

Associate Professor Daniels. Spring, 1900, 9:00; 4 M.

14. **History of France.** An outline study of French history from the establishment of the Frankish kingdom to the present time. Associate Professor Daniels. Spring, 1901, 10:00; 4 M.

15. **The Renaissance and the Reformation.**

Associate Professor Daniels. Winter, 1901, 10:00; 4 M.

16. **The History of Europe from the Reformation to the French Revolution.** This course will be preceded by a brief consideration of the Renaissance and the Reformation, after which the history of Europe will be traced through the political, territorial, and social changes of the sixteenth, seventeenth, and eighteenth centuries.

Associate Professor Daniels. Summer, 1900, 10:00; 4 M.

17. **History of the French Revolution and the Napoleonic Wars.**

Associate Professor Daniels. Fall, 1901, 10:00; 4 M.

18. **History of Europe since 1815.** In this course a study will be made of the conditions at the beginning of the period, and of the settlements effected by the Congress of Vienna. The history of each country will then be traced with special reference to the working out of the principles of constitutional government and nationality.

Associate Professor Daniels. Spring, 1900 and 1902, 12:00; 4 M.

19. **History of the United States.** An outline study of the political and constitutional history of the United States since 1789.

This course is particularly designed for teachers of history in the common and secondary schools, but is open to all students.

Associate Professor Daniels. Summer, 1900, 9:00; 4 M.

20. **Seminary in American History.** Omitted in 1900-1901.

21. **American Colonial History (1492-1776).** The primary object of this course is to trace the beginnings of our institutions and the sources of our constitution in the separate settlements; how those settlements were gradually drawn together into colonies; and how the colonies were pieced together into states forming an indissoluble Union. Fall, 9:00; 6 M.

22. **Political and Constitutional History cf the United States (1776-1829).** Prerequisite, Course 21. Winter, 9:00; 6 M.

23. **Political and Constitutional History of the United States (1829-1900).** Prerequisite, Course 22. Spring, 9:00; 6 M.

24. **Selected Topics in the Study of American Institutions.** To be given in 1901-1902.

25. **A Study of the Sources and Literature of American History.** Half course. Twice a week. Prerequisites, Courses 21, 22, and 23. To be given in alternate years in the Winter Quarter and oftener if demanded.

The method of study is substantially the same in all courses in American History. There will be lectures, reading of selected references to sources and secondary authorities, weekly written papers, and special written work. Clear and idiomatic English is expected in all papers and note-books written by the student. In all courses the student is presumed to be familiar with the general narrative history of the United States. In courses 21, 22, and 23, while special emphasis is laid on political and constitutional history, some attention will be given to social and economic conditions.

Greek Language and Literature.

Professor Woolery and Mr. Ohern.

For Courses 1 to 9, inclusive, see announcements of the Preparatory School.

10. **Homer's Iliad or Odyssey (Books I, II and III, or IV, V and VI) and Homeric Verse.** All the text is read metrically, some passages are memorized and others are assigned for translation in English verse. Etymology, Mythology and Prosody receive special attention. Seymour's "Iliad." Collateral reading: Jebb's "Introduction to Homer," and Gladstone's "Time and Place of Homer."

Summer and Spring, 8:00; 8 M.

11. **Aeschines Against Ctesiphon.** The aggressions of Philip of Macedon, the political institutions of Greece and the constitution of Athens are studied as an introduction to course 15. "Aeschines against Ctesiphon" by Richardson. Fall, 9:00; 8 M.

12. **Plato's Protagoras.** Attention is given to the study of Greek Philosophy in this connection. "Plato's Protagoras" by Towle. Collateral reading: Mitchell's "A Study of Greek Philosophy." Fall, 11:00; 8 M.

13. **Lucian's Shorter Dialogues.** Those who have had two years or more of Greek are eligible to membership in this course. "The Dialogues of the Dead" and other short dialogues will be read. "Selections from Lucian," by Williams. Fall, 8:00; 8 M.

14. **Lucian's Longer Dialogues.** Besides a study of Greek religion and mythology in connection with these satires, considerable time is given to sculpture. Williams' "Selections from Lucian;" Gardiner's "Greek Sculpture." Summer, 9:00; Winter, 8:00; 8 M.

15. **Demosthenes on the Crown.** Stress is laid on correct use of synonyms, Greek rhetoric and oratory. Frequent sight translations to catch the spirit of the orator. "Demosthenes on the Crown" by Tyler. Winter, 9:00; 8 M.

16. **New Testament Greek.** Luke's Gospel and James and First and Second Timothy. In translation pure, idiomatic English of the nineteenth century is required. Westcott and Hort.
Summer, 11:00; 8 M.

17. **New Testament Greek.** Mark's Gospel, James and Galations. Spring, 9:00; 8 M.

18. **Euripides' Alcestis.** The development of the Greek drama and the poetical beauty and literary finish of this production are studied. Metrical system given special attention. Supplemental reading: "The Tragic Drama" by Haigh. Winter, 11:00; 8 M.

19. **Modern Greek.** Vincent and Dickson's text is used, newspapers and magazines, and reports of archaelogical research in Greece. Prerequisite, six courses in Greek. Spring, 11:00; 8 M.

20. **Seminary in Greek.** Papers and discussions on assigned topics. Larger opportunities for original investigation and specialization. Graduate students and those well advanced in their college course, who desire to become specialists in this department, should take this course. Credit is given for one-third of a course each quarter, or more if the work accomplished justifies it.
Fall, Winter and Spring, Bi-weekly, Monday, 2-4 P. M., 8 M.
Professor Woolery and Mr. Ohern.

Latin Language and Literature.

Professor Douthat.

In all courses in this department frequent illustrations of Roman life are given by lantern views and lectures. Translations both oral and written are required from English into Latin, as well as from Latin into English. In the courses in poetry attention is given to

scanning. In the earlier courses particular stress is laid upon the collection of a working vocabulary.

For courses 1 to 11, inclusive, see announcements of the Preparatory School.

12. **Virgil's Eclogues and Georgics.** Chase and Stuart's "Virgil's Eclogues and Georgics," with scanning. Summer, 11:00; 21 U.

13. **Horace's Odes.** Latin writing and the study of synonyms. Shorey's "Horace's Odes and Epodes," or Merrill's "Catullus;" Miller's "Latin Composition." Fall, 11:00; 21 U.

14. **Aulus Gellius' Stories.** Frequent sight reading. Latin writing and conversation, and synonyms. Knapp's "Stories from Aulus Gellius;" Arrowsmith and Knapp's "Viri Romae" for sight reading; Miller's "Latin Composition." Winter, 11:00; 21 U.

15. **Cicero's De Amicitia and De Senectute.** Latin writing and conversation, and synonyms. Bennett's "De Amicitia and De Senectute;" Miller's "Latin Composition." Spring, 11:00; 21 U.

16. **Livy, Book XXI.** Westcott's "Livy," or Peck and Arrowsmith's "Roman Life in Prose and Verse;" Miller's "Latin Composition." Summer, 9:00; 21 U.

17. **Horace's Satires and Epistles.** Greenough's "Horace," or Peck and Arrowsmith's "Roman Life in Prose and Verse;" Miller's "Latin Composition." Fall, 9:00; 21 U.

18. **Cicero's Letters.** Chase and Stuart's "Letters of Cicero," or Peck and Arrowsmith's "Roman Life in Prose and Verse;" Miller's "Latin Composition." Winter, 9:00; 21 U.

19. **Cicero's De Officiis and De Oratore,** the first for sight reading and translation at sight, the second for regular class study. Chase and Stuart's "De Officiis" and Owen's "De Oratore;" Tomlinson's "Selections from Latin Authors;" Miller's "Latin Composition." Spring, 9:00; 21 U.

20. **Early Latin.** Text-books: Allen's "Remnants;" Merry's "Fragments;" Miller's "Latin Composition." Books of reference: Egbert's "Latin Inscriptions;" Johnston's "Latin Manuscripts." Special study of manuscripts. Summer, 8:00; 21 U.

21. **Plautus: Captivi, Trinummus, and Rudens.** Text-books: Morris's "Plautus;" Miller's "Latin Composition." Books of reference: Egbert's "Latin Inscriptions;" Johnston's "Latin Manuscripts." Fall, 8:00; 21 U.

22. **Juvenal.** Selected Satires. Text-books: Lindsay's "Juvenal; March's "Latin Hymns" for sight reading; Miller's "Latin Composition." Books of reference: Creighton's "History of Rome;" Gibbon's "Decline and Fall of the Roman Empire." Winter, 8:00; 21 U.

23. **Pliny's Letters.** Chase and Stuart's or Platner's "Select

Letters of Pliny the Younger;" Middleton's "Companion to Latin Authors;" Miller's "Latin Composition." Spring, 8:00; 21 U.

24. Tacitus: Germania and Agricola. Hopkins' "Germania and Agricola;" Clement's "Latin Selections;" Harper's "Classical Dictionary;" Cape's "Early Empire;" Miller's "Latin Composition." Summer, 10:00; 21 U.

25. Quintilian. Tenth and Twelfth Books. Frieze's "Tenth and Twelfth Books of Quintilian;" Erasmus's "Colloquies" for sight reading; Harper's "Classical Dictionary;" Cape's "Early Empire;" Miller's "Latin Composition." Fall, 10:00; 21 U.

26. Seneca. Hurst and Whiting's "Moral Essays of Seneca;" Knapp's "Martian," for sight reading; Teuffel's "History of Roman Literature;" Miller's "Latin Composition." Winter, 10:00; 21 U.

27. Petronius. Special study of the Latin in the "Sermo Plebeius" as an introduction to the Romance Languages and Comparative Philology. Gudemann's "Latin of the Empire," or Walter's "Cena Trimalchionis;" Cooper's "Word Formation in the Roman Sermo Plebeius." Spring, 10:00; 21 U.

Romance Languages and Literatures.

Professor McKenzie, Mr. Chollet and Mr. Ballard.

French.

1. Elementary Course. Grammar, reading, and as much practice as possible in pronunciation and conversation. Whitney's Grammar; reading of easy modern prose. Summer, 11:00; Fall, first section, 11:00; second section, 12:00; Spring, 9:00; 10 U.

2. Elementary Course. A continuation of Course 1. The Grammar will be finished, and the reading of easy French texts continued. Summer, 9:00; Winter, first section, 11:00; section section, 12:00; 10 U.

3. Modern Prose. A continuation of Course 2. Reading from works by Erckmann-Chatrian, Dumas, Daudet, George Sand, etc. Review of the Grammar. Grandgent's "Materials for French Composition." It is expected that in Courses 1, 2, and 3 the elements of French Grammar will be mastered, a fair pronunciation acquired, and 400 to 500 pages of modern prose and poetry read. Spring, first section, 11:00; second section, 12:00; 10 U.

4. Fiction and Poetry of the Nineteenth Century. Works by Daudet, Theuriet, About, de Maupassant, de Musset, Lamartine, etc. Whitney's Grammar, part second. Practice in writing and speaking French, continued through Courses 5 and 6. For students who have had one year of French. Fall, 12:00; 10 U.

5. **Historical and Dramatic Works of the Nineteenth Century.** Michelet, Labiche, Dumas, Scribe, Augier, Banville.
Winter, 12:00; 10 U.

6. **Drama of the Seventeenth Century.** Corneille, Racine, Molière. Spring, 12:00; 10 U.

Note.—Courses 4, 5, and 6 are continuous, and it is recommended that they be taken in this order; qualified students will, however, be admitted to Course 5 or 6 without having had the course preceding.

7. **French Tragedy (advanced course).** The works of Corneille and Racine, with one drama by Victor Hugo; outside reading; lectures on the drama from the Middle Ages to the death of Racine.
Fall, 2:00; 10 U.

8. **French Comedy (advanced course),** with especial study of the life and works of Molière. Winter, 2:00; 10 U.

9. **French Literature of the Nineteenth Century,** from the Romanticist movement to the present. Fiction, Lyric Poetry, Drama, Criticism. Spring, 2:00; 10 U.

10. **Victor Hugo,**—his life and works, and his place in modern literature. Fall, 3:00.

11. **French Literary Criticism.** Sainte-Beuve, Taine, Brunetière, Lemaitre, Gaston Paris, etc. Winter, 3:00.

12. **French Literature of the Seventeenth and Eighteenth Centuries.** In this course comparatively little attention will be devoted to the drama, which is studied in Courses 6, 7, and 8. Spring, 3:00.

13. **French Literature of the Sixteenth Century.** Marot, Rabelais, La Pléiade, Montaigne. Fall.

Note.—Courses 7 to 13 are essentially courses in literature. They will be conducted partly in French, and students will have frequent opportunity to speak and write the language. In each course, as many texts as time permits will be read in class; others will be read outside and discussed in class. Part of the work will consist of special reports on assigned subjects.

14. **Old French.** The development of the language from Latin; phonology and grammar. La Chanson de Roland, Aucassin et Nicolette. Winter.

15. **Old French.** A continuation of Course 14. Reading of texts; lectures on mediaeval French literature and on the history of the language. Spring.

16. **French Conversation.** Open to students who are able to read French with ease, and have some knowledge of the grammar.
One-third course. Spring, Monday and Wednesday, 3:00;
Summer, 10:00; 10 U.

17. **Prose and Poetry.** Selections from authors of various periods. Composition. For students who have had one year or more of French. Summer, 8:00.

20. **Research Work in French Literature** will be arranged for advanced students, including work on subjects suitable for theses.

Italian.

1. **Elementary Course.** Grammar, reading, and composition. It is desirable that students who take this course should have some knowledge of Latin. Fall.

2. **Elementary Course.** A continuation of Course 1. Winter.

3. **Elementary Course.** A continuation of Course 2. Spring.

Courses 1, 2, and 3 in Italian will not be given during the year 1900-1901.

4. **Italian Literature of the Middle Ages and Renaissance.** Two lectures or conferences each week, with a large amount of outside reading and preparation of reports on assigned subjects. Special attention will be paid to the influence of France on early Italian literature, to the life and works of Dante, and to the transition from the Middle Ages to the Renaissance. A reading knowledge of French or Italian will be of advantage, but not absolutely necessary. Winter.

Spanish.

1. **Elementary Course.** Grammar and reading, with practice in pronunciation, conversation, and composition. A knowledge of Latin or French will be of advantage to the students who take this course. Ramsey's "Text-Book of Modern Spanish," or "Ollendorff's New Method," by Velasquez and Simonné; Ramsey's "Elementary Reader." Fall, 9:00.

2. **Elementary Course.** A continuation of Course 1; reading conversation, and composition. Ramsey's Reader; C. Fontaine's Doce Cuentos Escogidos; selections from Valera, Roure, Pardo-Bazan, and other modern authors. Winter, 9:00.

3. **Intermediate Spanish.** A continuation of Course 2. Review of the grammar; study of idiomatic constructions; conversation; reading of works by Tamayo y Baus, Alarcon, Breton de los Herreros, Perez-Galdos, etc. Spring, 9:00.

4. **Modern Spanish Literature.** Careful study of works by modern Spanish and Spanish-American writers, such as Nuñez de Arce, Perez-Galdos, Campoamor, Heredia, Peza, etc. For students who have had one year of Spanish. Fall.

5. **Spanish Literature of the Renaissance.** Cervantes' Don Quijote de la Mancha; dramatic works of Calderon de la Barca, Lope de Vega, and other writers of the "Siglo de Oro." Winter.

6. **Old Spanish Literature** (for qualified students). El Cid, and other early works. Spring.

Germanic Languages and Literatures.

Professor Truscott, Dr. Carr, and Mr. Porterfield.

Note.—The text-books named in the following courses may be changed at any time, but the grade and character of the work outlined in each course will remain the same.

German.

1. **Elementary German.** A course for beginners, the object being to acquaint the student with the elements of the grammar, to give him a reading knowledge of the easiest German prose, and as much practice as possible in pronunciation. Thomas' "Grammar," Part I; Super's "Elementary German Reader," Part I.

.. Summer, 8:00;
Fall, first section, 9:00; second section, 12:00; 22 U.

2. **Elementary German.** A continuation of Course 1. Reading of easy prose and poetry. Several poems will be memorized and special attention given to correct pronunciation. Super's "Elementary Reader," Parts II, III, IV; Leander's "Traumereien." Andersen's "Bilderbuch ohne Bilder."

Winter, first section, 9:00; second section, 12:00; 22 U.

3. **Elementary German.** A continuation of Course 2. Reading, dictation and conversation. Elementary work in composition, accompanied by a review of the main points of the grammar and a special study of the irregular verbs. "Immensee;" "Höher als die Kirche;" "L'Arrabbiata" (Lentz' edition); Hatfield's "Materials for Composition."

Spring, first section, 9:00; second section, 12:00; 22 U.

4. **German Prose.** Rapid reading of a large amount of prose by modern authors to render the student familiar with the idioms of the language and give a large and varied vocabulary. Nichol's "Three German Tales;" Wildenbruch's "Stille Wasser;" Keller's "Kleider machen Leute." Fall, 8:00; 22 U.

5. **Composition and Conversation.** Practice in writing German and translation of English prose into German. Discussion of grammatical points in connection with the translation. Study of the irregular verbs. Dictation. A part of the time will be devoted to conversational exercises. Reading at sight. Harris' "Prose Composition;" Watson's "German Sight Reading." Schrakamp's "Erzaehlugen aus der deutschen Geschichte."

Winter, 8:00; 22 U.

6. **German Poetry.** Translation of two long poems. Reading and memorizing of a great number of short well-known poems. Von Klenze's "Deutsche Gedichte;" "Hermann und Dorothea" (Hatfield); "Trompeter von Saekkingen" (Frost). Spring, 8:00; 22 U.

7. **Survey of German Literature.** This course deals in outline with the history of the literature, its beginnings and development, and lays stress on the prominent authors and chief epochs. Assigned private reading in the various standard histories of the literature. Translation in class of pieces, representative of the different writers and periods. Keller's "Bilder aus der deutschen Litteratur." Fall, 11:00; 22 U.

8. **Advanced Composition.** Dictation and conversation. Exercises in conversation will be based on Bronson's "Colloquial German;" Jagemann's "Prose Composition" and "Syntax." Winter, 11:00; 22 U.

9. **Heine.** Study of his life. Reading from his prose and poetry. Spring, 11:00; 22 U.

10. **Lessing.** Study of his life. Reading of "Die Juden;" "Nathan der Weise." Weekly themes in German on assigned subjects. Fall, 9:00; 22 U.

11. **Goethe.** Study of his life. Reading of "Werther's Leiden;" "Egmont;" "Torquato Tasso." Weekly themes in German on subjects selected by the student. Winter, 9:00; 22 U.

12. **Schiller.** Study of his life. Reading of "Wallenstein;" "Wilhelm Tell." Long bi-weekly themes in German on assigned subjects. Spring, 9:00; 22 U.

13. **Scientific German.** Intended for students in the scientific courses who have had at least a year of elementary German. The purpose is to teach the students to read at sight scientific articles in German. Hodges' "German Science Reader;" Cohn's "Ueber Bakterien." Fall, 10:00; 22 U.

14. **Scientific German.** A continuation of Course 13. Reading of monographs on various scientific subjects. Prerequisite, German 13. Winter, 10:00; 22 U.

15. **Historical Prose.** A reading course of historical prose. Subjects taken from the history of Germany and its literature. For students who have had two years of German. Schoenfeld's "German Historical Prose;" Freytag's "Karl der Grosse;" Freytag's "Doktor Luther." Spring, 10:00; 22 U.

17. **Intermediate Course.** A course in reading and composition. For students who have had either two or three terms (six or nine months) of German. This course may be taken by students who have had Courses 1 and 2—or by those who have had courses 1, 2, and 3, since the texts used will be different from those used in Courses 3 and 4. "Tales from Hauff" (Goold); Rosegger's "Waldheimat" (Fossler); Schiller's "Der Geisterseher."

Dr. Carr. Summer, 9:00; 22 U.

18. **Advanced German.** A course in German literature. For students who have had two years of German. Bernhardt's "Freudvoll und Leidvoll." Osthaus' "Aus dem Leben eines Taugenichts." Keller's "Dietegen."

Dr. Carr. Summer, 10:00; 22 U.

19. **Conversation.** The purpose of this course is to teach the student to speak and understand the language. Vos' "Materials for German Conversation." Prerequisites, German 1, 2, 3.

Dr. Carr. Summer, 11:00; 22 U.

Anglo-Saxon.

1. **Anglo-Saxon.** Introductory course for students in English and German. An introduction to the historical study of the English language. Grammar and translation of Anglo-Saxon prose. Study of word forms with special reference to modern English. Prerequisites: English 1; Rhetoric 1 and 2; German 1, 2, 3.

Fall, 8:00; 22 U.

Not given in 1900.

English Language and Literature.

Professor Armstrong and Mr. Holden.

1. **Development of the English Language.** History and structure of the English language; sources of its vocabulary; history of word formation and inflections; exercises in Etymology. Recitations, lectures, and reports. Prerequisites, Rhetoric 1 and 2.

Winter, 10:00; 20 U.

2. **General Survey of English Literature.** This course is intended to be an introduction to the study of literature. Its purpose is to give the student a conception of the nature of literature, a general knowledge of the great field of literature, and a definite knowledge of a few English classics. Recitations and critiques on assigned readings. Halleck's "History of English Literature," and copies of complete masterpieces. Prerequisites, Rhetoric 1 and 2.

Summer, Fall, Spring, 11:00; 20 U.

3. **Nineteenth Century Literature.** A survey of the chief writers of the nineteenth century in England, with a critical study of a few masterpieces of representative writers. Recitations, lectures and critiques on assigned readings. Prerequisites, Rhetoric 1 and 2, and English Literature 2. Fall, 9:00; 20 U.

4. **American Literature.** A brief outline of its historical development, and a study of selected works of representative authors.

Recitations, lectures, and critiques on assigned readings. Prerequisites, Rhetoric 1 and 2, and English Literature 2.

Summer, Winter, 8:00; 20 U.

5. **English Literary Criticism.** A study of the leading principles of criticism with practical exercises in the criticism of representative specimens of the various kinds of literature. Recitations, lectures, and critiques on assigned readings. Prerequisites, Rhetoric 1 and 2, and English Literature 2, 3, and 4. Winter, 9:00; 20 U.

7. **The Bible as Literature.** A study of the English Bible as literature; discussion of the literary form and interpretation of some of its masterpieces. Recitations, lectures, class readings. Prerequisites, Rhetoric 1 and 2, and English Literature 2, 3, and 4.

Summer, Spring, 9:00; 20 U.

9. **Representative Plays of Shakespeare.** The interpretation of representative plays. Recitations, class readings, and reports on collateral readings. Boas' "Shakespeare and His Predecessors," and Rolfe's annotated editions of the plays read in class. Prerequisites, Rhetoric 1 and 2, and English Literature 2, and 3 or 4.

Summer, Spring, 10:00; 20 U.

11. **The English Novel.** The development of the English novel, with a study of selected authors and types. Prerequisites, Rhetoric 1 and 2, and English Literature 2, 3, 4, and 5.

Spring; hour to be arranged; 20 U.

15. **Tennyson.** Studies in the sources, form, and literary interpretation of Tennyson's poems. Recitations, class readings, and critiques. Prerequisites, Rhetoric 1 and 2, and English Literature 2, 3, and 5. Fall, 8:00; 20 U.

16. **Shakespeare's English Histories.** A critical study of Shakespeare's English Histories as to sources of material, text, and literary interpretation. Recitations, lectures, class readings, and critiques. Rolfe's annotated editions of the plays will be used. Prerequisites, Rhetoric 1 and 2, and English Literature 2, and 3 or 4.

Fall, 10:00; 20 U.

17. **Philology of the English Language.** A critical study of the rise and formation of the English language. This course presents a much more thorough study of the principles and elements of the English language than is found in Course 1. Earle's "Philology of the English Tongue" will be taken as the basis of this course. Prerequisites, Rhetoric 1 and 2, English Literature 2, and Anglo-Saxon 1. Spring, 8:00; 20 U.

18. **Contemporary American Writers.** An attempt will be made to interpret the spirit and to note the tendency of the best American literature of to-day. Such writers as Whitman, Lanier, Aldrich, Stedman, Howells, James, Crawford, Cable, Field, Page, Riley, Stockton, Emma Lazarus, Maurice Thompson, George E. Woodberry,

Stoddard, Gilder, Harte, and others will be glanced at and some of them will be studied closely. Lectures, prescribed reading, and written work. Students will be encouraged to form and express opinions of their own about what they read. This course is open to those who have had Course 2 or its equivalent.

Associate Professor Barbe. Summer, Spring, 11:00.

19. **The Romantic School of Poetry.** From Burns and Blake to Keats. Wordsworth, Coleridge, Shelly, Byron, Scott, Keats and others will be discussed. Lectures, recitations, assigned readings, reports. Prerequisites, Rhetoric 1 and 2, and English Literature 2.

Associate Professor Barbe. Spring, 10:00.

Rhetoric and Elocution.

Professor Patterson and Mr. Smith.

[Note.—The courses in this department are open only to students who have completed the entrance requirements in English. Courses beyond Course 2 in both subjects are open only to students whose grade in Rhetoric 2 or Elocution 2 is 80 per cent or over.]

Rhetoric.

1. **Composition.** The work is almost wholly practical. Daily themes; criticism in class. A number of book reviews and three long essays. In addition to the text-book work, special study of several prose masterpieces. It is intended that the student shall gain a thorough practical knowledge of all matters of rule. Lectures.

Summer, Fall, 11:00; Spring, 9:00.

2. **Rhetoric.** In this course especial attention is given to matters of taste. The student is required to read and make written reports on a number of masterpieces. Long essays. Extempore composition and criticism. Class study of several literary masterpieces. Lectures. In this quarter the instructor endeavors to meet each member of the class as often as possible for consultation. Prerequisite, Rhetoric 1. Winter, 11:00.

3. **Description and Narration.** Close study of literary masterpieces illustrating the various literary forms. Constant practice in applying the principles. Criticism. Lectures. Prerequisites, Rhetoric 1 and 2. Spring, 11:00.

4. **Exposition and Argumentation.** Class study of literary masterpieces illustrating the various literary forms. Study of great orations. Preparation of briefs. Preparation of a thesis. Prerequisites, Rhetoric 1 and 2. Spring, 11:00.

5. **The Essay.** The essayists of the nineteenth century are studied to illustrate the uses of the essay form and the growth of this element in our literature. Criticisms, with written reports on assigned topics, and writing of types of essays. Prerequisites, Rhetoric 1 and 2. Fall, 10:00.

6. **The Short Story and Novel.** Examples of the various forms are read and methods analyzed. Practice in writing is supplemented by criticism before the class and individual consultations. Prerequisites, Rhetoric 1 and 2. Winter, 10:00.

7. **The Grammar of Modern English.** An advanced course in the Grammar of Modern English; of especial value to teachers of English. Prerequisite, English Literature 1. Summer, 10:00.

8. **Themes.** An advanced theme course. Daily themes are required. The class will meet the instructor once or twice a week for discussion and criticism. Individual consultations. Prerequisites, Rhetoric 1 and 2. Spring, 10:00

9. **Style.** A study of style in nineteenth century English. Reference to Spencer, DeQuincey and others. Constant writing of papers. Criticism. Consultations. Fall, 10:00.

10. **Prose in the Fifteenth, Sixteenth, and Seventeenth Centuries.** A study of the beginnings of style in English prose. Individual investigation of assigned topics. Reports. Lectures. Winter, 8:00.

11. **Style in the Eighteenth Century.** The development of an artistic sense in the writing of English prose. Study of the great masters of prose style in this century. Reports. Lectures. Spring, 10:00.

12. **Dramatic Elements.** A study of structure and style in the beginnings of English drama and especially in the prose drama from Shakespeare to Shirley. Summer, 9:00.

13. **Prose Drama from Shirley to Sheridan.** The development of artistic structure and style in the prose drama of this period. Fall, 9:00.

14. **The Drama.** Examples of the various forms of nineteenth century drama are read and methods analyzed. Especial attention to contemporary drama. Practice in writing is supplemented by criticism before the class. Winter, 9:00.

15. **The Poem.** A study of metre and the uses of poetic forms in the great poets. Lectures. Investigation of assigned topics. Composition and criticism. Fall. Hour to be arranged.

16. **Literary Expression.** A course of twelve readings from the works of the greatest English authors from Chaucer to Addison, to arouse appreciation of literature. This course and Courses 17 and 18 will each be given credit as one-third of a course. Courses 16, 17, 18 must be taken by all students in Rhetoric and Elocution. Professors Armstrong, Professor Patterson, Associate Professor Barbe, and Mr. Smith. Fall, Thursday, 7:30 P. M.

17. **Artistic Expression.** A course of twelve talks on Fine Art, to arouse appreciation of Expression in Art. (See Course 16.) Mrs.

Hubbard, Mr. Leonard, Professor McKenzie, Assistant Professor Clark, Mr. Smith, and Professor Patterson.

Winter, Thursday, 7:30 P. M.

18. **Literary Expression.** A continuation of Course 16, from Goldsmith to Browning. Spring, Thursday, 7:30 P. M.

20. **Rhetorical Research.** Any student sufficiently advanced may pursue a special line of inquiry in the investigation of some restricted field of rhetorical study under the direction of the Professor of Rhetoric. Students who make their major subject Rhetoric will find it advisable to take as much English Literature as possible, certainly English Literature 1 and 2.

Graduate students who make Rhetoric their major must have had at least nine courses in Rhetoric. Courses 1 to 4 inclusive are undergraduate courses; from 5 to 16 either undergraduate or graduate courses.

Elocution.

1. **Elocution.** A preliminary course in the essentials of expression to remove faults and mannerisms and to establish correct use, freedom, and ease; to give the student control of the instruments of expression. Section drill, rehearsals, and recitals

Summer, Fall, Winter, 12:00.

2. **Voice and Vocal Expression.** A thorough training in voice. The student will prepare a very few selections, almost all his time in and out of the class being given to rendering the voice an efficient instrument of expression. Individual training. This course will be credited as two-thirds of a course. Winter, 12:00.

3. **Expression.** A continuation of Course 1. Especial attention to the technique of the speaker's art. Individual and section drill. Assigned literature for analysis and interpretation. Prerequisite, Elocution 1. Spring, 12:00.

[Note.—Further courses in Elocution should not be undertaken without at least three courses previously in English Literature, not including English Literature 1.]

4. **Expression in Drama.** Study of a Shakespearean play. Analysis and interpretation of character and scene. Problems of the stage. Stage management, etc. Lectures. Fall, 9:00.

5. **Oration and Argumentation.** Study of great orations. Lectures on extemporaneous speaking, structure and diction of spoken discourse, etc. Constant practice in extemporaneous speaking and debate. Preparation of briefs and of one oration.

Summer. Hour to be arranged.

6. **Pulpit Oratory.** Homiletic analysis. Structure and delivery of the sermon. Reading of hymns, psalms, and selections from the Scriptures. Prerequisites, Rhetoric 1 and 2, Elocution 1; also recommended, English Literature 7. Summer, 8:00.

7. **Public Reading.** Individual training with a view to platform work. Methods of analysis and interpretation. The work of the student throughout this course is centered upon four selections. Prerequisites, Elocution 1 and 2. Winter, 9:00.

8. **Expression and Criticism.** Each student will appear before the class once each week. Class criticism and discussion. Two original selections will be required. Prerequisites, Elocution 1 and 2 and Rhetoric 1. Spring, 9:00.

(The number of days each week will depend on the number of students in the class.)

9. **Recitals.** Preparation of a program, and the giving of a public recital. Individual training. Open to students who have had six courses in Elocution. Fall. Hour to be arranged.

10. **Exposition and Argumentation.** Course 4 in Rhetoric is recommended at this point as preliminary to Courses 11 and 12.

11. **Oratory.** Preparation and delivery of orations. Study of models; briefs, etc. Daily practice in speaking. Prerequisites, Elocution 1 and 10. Fall, 11:00.

12. **Extemporaneous Speaking and Debate.** Daily practice. Lectures. Prerequisite, Elocution 1. Winter, 11:00.

13. **Dramatic Presentation.** Six plays will be cast and rehearsed. Possible production of a play.
Fall. Hour to be arranged.

14. **Teachers' Course in Elocution.** A course in the method of teaching the subject. Each student will conduct recitations of the class, give lectures, criticisms, etc. Spring, 12:00.

16, 17, 18. See under Rhetoric, 16, 17, 18.

19. **Interpretation.** Any student sufficiently advanced may pursue the analysis and interpretation of a complete play or other long masterpiece, or of a number of works by some one author under the direction of the Professor of Elocution.

Note.—The necessity of English Literature in connection with the work in Elocution cannot be too strongly emphasized. The Professor of Elocution will recommend no student as a teacher of Elocution or as a public reader unless he has had, in addition to his courses in Elocution as his major, at least six courses in English Literature, not including English Literature 1.

Mathematics.

Professor Stewart and Assistant Professor Thompson.

1. **University Algebra.** Progressions, Binomial Theorem, Theorem of Undetermined Coefficients, Summation of Series, Theory and Practice of Logarithms, Logarithmic and Exponential Series. Wells' "University Algebra." Fall, 10:00; Spring, 9:00.

2. **Solid Geometry.** Geometry of the Prism, Pyramid, Cylinder, Cone and Sphere, Practical Exercises. Wells' "Solid Geometry."
Summer, 10:00; Fall, 9:00; Winter, 10:00.

3. **Plane Trigonometry.** Development of Formulae, practical problems. Wells' "Revised Trigonometry."
Summer, 9:00; Winter, 9:00; Spring, 10:00.

4. **Theory of Equations.** Solution of Higher Equations, Cardon's Method for Cubic Equations, Sturm's Theorem, Horner's and Newton's Methods of Approximation, Fourier's Theorem. Macknie's "Algebraical Equations." Fall, 11:00.

5. **Spherical Trigonometry.** Development of Formulae. Applications to Surveying, Navigation, and Astronomy. Bowser's "Treatise on Trigonometry." Winter, 11:00.

6. **Plane Analytic Geometry.** Cartesian and Polar Co-ordinates. Properties of Conics: Circle, Ellipse, Parabola, and Hyperbola. Nichol's "Analytic Geometry."
Summer, 8:00; Fall, 8:00.

7. **Analytic Geometry.** Higher Plane Curves. General Equation of the Second Degree. Geometry of Three Dimensions, Ellipsoids, Paraboloids, Hyperbolic-Paraboloids. Nichol's "Analytic Geometry." Spring, 11:00.

8. **Differential Calculus.** Differentiation of Algebraic and Transcendental Functions. Taylor's and Maclaurin's Formula, Evaluation of Indeterminate Forms. Maxima and Minima, Tangents and Normals, Asymptotes. Involutes and Evolutes, Curvature, Curve Tracing. Taylor's "Revised Calculus."
Summer, 11:00; Winter, 8:00.

9. **Integral Calculus.** Integration of Algebraic and Transcendental Functions. Areas between Limits. Surfaces and Solids of Revolution. Double and Triple Integration. Center of Mass. Moment of Inertia. Taylor's "Revised Calculus." Spring, 8:00.

10. **Determinants.** Various Properties of Determinants. Laplace's and Cauchy's Method of Development. Differentiation of Determinants. Peck's "Determinants." Fall, 3:00.

Astronomy.

Professor Stewart.

1. **Descriptive Astronomy.** Young's "General Astronomy."
Winter, 3:00.

2. **Descriptive Astronomy.** Continuation of Course 1. Young's "General Astronomy." Spring, 3:00.

Physics.

Professor Hodges and Mr. Conley.

1. **Elementary Physics.** Mechanics and Heat. Recitations, supplemented by experiments and laboratory exercises. One hour

per week at least will be devoted to individual laboratory work. Wentworth and Hill's "Text Book of Physics." Prerequisite, Plane Geometry. Winter, 11:00; 11 S.

Laboratory hours to be arranged.

2. **Elementary Physics.** Electricity and Magnetism. Sound and Light. Continuation of Course 1. Spring, 11:00; 11 S.

Courses 1 and 2 will satisfy the entrance requirements in Physics. Students in the College who have not presented work in Physics among their entrance requirements, may receive college credit for these courses.

4. **Experimental Physics.** A laboratory course exclusively, consisting of elementary quantitative experiments. Open to students who do not take Course 6. Sabine's "Laboratory Course in Physics." Prerequsites, Physics 1 and 2, and Plane Trigonometry.

Full course, Summer, 2:00; 1 S.

May be taken in the Fall, Winter and Spring quarters, one-third course each quarter. Mondays, Wednesdays, 1:30; 1 S.

6. **General Physics.** Mechanics. Lectures and recitations, accompanied by individual laboratory work, which, though elementary, is strictly quantitative. Required of candidates for Engineering degrees. Ames' "Theory of Physics." Prerequisite, Mathematics 3. Summer. Lectures: Monday, Wednesday, Friday, 9:00; 11 S.

Laboratory: Tuesday, Thursday, 2:00; 1 S.

Fall. Lectures: Monday, Wednesday, Friday, 10:00; 11 S.

Laboratory: Tuesday, Thursday, 10:00 and 1:30; 1 S.

7. **General Physics.** A continuation of Course 6. Sound, Heat, and Light. Lectures and Laboratory work.

Winter. Lectures: Monday, Wednesday, Friday, 10:00; 11 S.

Laboratory: Tuesday, Thursday, 10:00 and 1:30; 1 S.

8. **General Physics.** A continuation of Course 7. Electricity and Magnetism. Lectures and Laboratory work.

Students who have not taken Course 7 may be admitted to this course, if they have taken Course 6.

Spring. Lectures: Monday, Wednesday, Friday, 10:00; 11 S.

Laboratory: Tuesday, Thursday, 10:00 and 1:30; 1 S.

10. **Sound.** Advanced theoretical work. Lectures and Laboratory exercises. Prerequisites, Physics 6, Mathematics 9.

Half course, first six weeks, Fall, 9:00; 11 S.

11. **Light.** Lectures and laboratory measurements. Prerequisites, Physics 6, Mathematics 9.

Half course, second six weeks, Fall, 9:00; 11 S.

12. **Electrical Measurements.** Advanced laboratory work. The student uses measuring instruments of precision, sensitive galvanometers, apparatus for accurate measurement of resistance, current,

electromotive force, induction, magnetic properties of iron, etc. Carhart and Patterson's "Electrical Measurements." Prerequisites, Physics 8, Mathematics 9.

One-third course, Fall, Monday, Wednesday, 1:30; 1 S.

17. **Dynamos and Motors.** The elements of the general theory of dynamos and motors. Lectures and laboratory work. Prerequisite, Physics 8. Course 12 may be substituted for the laboratory work of this course.

Spring. Lectures: Monday, Wednesday, Friday, 9:00; 11 S.
Laboratory: Tuesday, Thursday, 1:30; 11 S.
One-third course. Winter, 1900, 7 P. M.; 11 S.

20. **Special Work.** Students desiring to pursue any line of special work in the Department of Physics will be given opportunity to do so to the extent that the time of the instructors and the laboratory equipment will permit. Credit for such work will be allowed in proportion to the work done.

Chemistry.

Professor Whitehill and Assistant Professor Folin.

1. **Inorganic Chemistry.** This course is designed for beginners, and serves as a general introduction to chemical methods and operations. It includes a systematic study of the laws of chemical combinations, the source, preparation, properties and compounds of the non-metallic elements and the principles and theories of chemical philosophy. Experimental lectures, laboratory work, and recitations.

Summer, 10:00; Fall, first section, 9:00; second section, 11:00;
Spring, 10:00; 20 S.

2. **Inorganic Chemistry.** This course includes the study of the metallic elements, and special attention is paid to the application of Chemistry in Agriculture, Engineering, Medicine, and every-day life. Lectures, laboratory work, and recitations.

Summer, 9:00; Winter, first section, 9:00; second section, 11:00;
Fall, 10:00; 20 S.

3. **Organic Chemistry.** This course includes the study of the more important organic compounds, together with the laboratory processes for the preparation of such compounds. Lectures, laboratory work, and recitations. Spring, 9:00; 20 S.

4. **Qualitative Analysis.** A laboratory course designed for students who are familiar with the elementary principles of Chemistry. It includes the preparation of the more important gases and salts, and the detection of the elements and their compounds.

Half course, Summer, 2:00;
One-third course, Fall, Tuesdays, Thursdays, 1:30; 22 S.

5. **Elementary Quantitative Analysis.** This course includes a small number of simple gravimetric, volumetric, and electrolytic

determinations, together with the study of the operations involved. Laboratory course. Half course, Summer, 2:00; 22 S.
One-third course, Winter, Tuesdays, Thursdays, 1:30; 22 S.

6. **Analysis of Coal, Coke and Water.** This course is designed especially for Engineering students, but is open to others who have the necessary preliminary training. Laboratory course. One-third course. Spring, Tuesdays and Thursdays, 1:30; 21, 22 S.

7. **Toxicology.** Especially designed for medical students. The course will include a study of inorganic and organic poisons, their physiological effects and antidotes. Laboratory course.
Spring, Tuesdays and Thursdays, 1:30; 21, 22 S.

8. **Water and Food Analysis.** Analytical Chemistry as applied to domestic science. This course is in part identical with Course 7, but includes analysis of water and of foods.
Spring, Tuesdays and Thursdays, 1:30; 21, 22 S.

9. **Quantitative Analysis.** This course is designed for students who expect to make Chemistry a specialty. It includes exercises in determining the composition of ores, minerals, and various technical compounds. Instruction is also given in assaying, gas analysis, and in the analysis of iron and steel. Exercises are selected to give as wide an acquaintance as possible with laboratory methods. One-third course each quarter.
Summer, Fall, Winter, Spring, Mondays, Wednesdays, 1:30; 21, 22 S.

10. **Iron Ores, Pig Iron, and Steel.** This course includes practice in the special methods of analysis of ores, pig iron and steel in use in the laboratories of the iron and steel works located in West Virginia and Western Pennsylvania. One-third course.
Summer, Fall, Winter, Spring, Tuesdays, Thursdays, 1:30; 21 S.

11. **Medical Organic Chemistry.** This is a lecture and laboratory course in such special subjects of organic Chemistry as carbohydrates, fats, proteins, and foods in general, together with certain organic amido and other nitrogenous compounds.
Fall, 10:00 to 12:00; 21 S.

12. **Physiological Chemistry.** This course is a continuation of Course 11 and includes lectures and laboratory work on ferments, digestion, respiration, nutrition and general animal metabolism.
Winter, 10:00 to 12:00; 21 S.

13. **Medical Analysis.** This course includes a study and practice of all the essential analytical methods as used in modern practice of medicine. Spring, 10:00 to 12:00; 21 S.

The time announced for Courses 11, 12, and 13 is subject to change.

14, 15, 16. **Organic Chemistry.** These courses are open to students of Pharmacy only. The courses are largely laboratory courses with E. Fischer's "Organische Praparate" as laboratory manual and

with Gattermann's "Methods of Organic Chemistry" and Lassar-Cohn's "Methods of Organic Chemistry" for reference. In addition to six hours' laboratory work a week, two lectures or recitations will be required. Richter's "Organische Chemie" (last German edition) will be used as a basis for these. The students will also be required to write abstracts and discussions of some of the best current articles on the subject so as to familiarize them with the current chemical periodicals.

Fall, Winter, Spring; Tuesdays, Wednesdays and Thursdays, 10:00-12:00; 22 U.

Lecture and recitation hours to be arranged.

17. **The Chemistry of Every-Day Life.** A course of synoptic lectures, including a study of fundamental facts and principles of Chemistry, fully illustrated by experiments.

One-third course, Fall, Tuesdays, 7:00 P. M.; 20 S.

20. **Research Work.** Chemistry offers a wide field for investigation. Special work in any of the various departments of the science may be taken in the laboratory under the direction of the instructors, and credit will be given in proportion to the amount of work accomplished. 21, 22 S.

For courses in Agricultural Chemistry, see announcements of the College of Agriculture.

Geology and Mineralogy.

Professor Brown.

1. **Physical Geography.** An elementary course for which no credit is given toward a college degree, but which must be taken before students are admitted to other courses in this department, unless they have had its equivalent elsewhere. Fall, 10:00; 30 S.

2. **Geographic Geology.** The crust of the earth; river valleys; plateaus and mountains; man and nature; the economic products of the earth; meteorological instruments and methods. Open to any University student. Davis' "Physical Geography."

Summer, Winter, 10:00; 30 S.

3. **General Geology.** A general course in dynamic and structural Geology. Economic applications of Geology will receive special attention. Numerous excursions will be made. The University is situated in a mining region, and within five miles of the western fold of the Appalachian mountains; the advantages for the practical study of Geology are therefore almost unequaled. Recitations, lectures and field work. LeConte's "Elements of Geology." Prerequisites, Chemistry 1, Physics 2.

Summer, 8:00; Fall, 11:00; Spring, 9:00; 30 S.

4. **Paleontology.** The progress and development of plants and animals through the different ages of the earth. For illustration in

this subject the University has an equipment of many thousands of fossils, casts and models. Recitations and lectures. LeConte's "Elements of Geology." Prerequisites, Zoölogy 1 and Botany 2.

Summer, Winter, 11:00; 30 S.

5. **Economic Geology.** Common rock and vein-forming minerals; Physical Geography and Geology of the United States; the origin of ore deposits; mining terms and methods; metalliferous deposits. Recitations and lectures. Tarr's "Elements of Economic Geology." Prerequisite, Geology 3. Spring, 11:00; 30 S.

6. **Advanced Economic Geology.** The fuels—coal, oil and natural gas—soils, clays and fertilizers, precious stones and building stones. The University is in the midst of a great coal-producing region, while oil and gas wells are within easy reach. Recitations and lectures. Tarr's "Elements," and Merrill's "Stones for Building and Decoration." Prerequisite, Geology 5. Fall, 10:00; 30 S.

7. **Mineralogy.** Crystallography; physical qualities of minerals; description of minerals consisting of basic elements to the silicates. The University has a good collection of minerals for practical instruction. Open to all University students. Recitations, lectures and practical determinations. Dana's "Manual of Mineralogy." Summer, 9:00; Fall, 8:00; Winter, 9:00; 30 S.

8. **Advanced Mineralogy.** The silicates and hydrocarbon compounds and their determination. Dana's "Manual of Mineralogy."

Winter, 8:00; 30 S.

Zoology.

Professor J. B. Johnston and Mr. Parke.

The courses in Zoölogy are arranged for students who elect this as their major subject, and for those who expect to take the course in medicine. Students who wish a general knowledge of Zoölogy will find Courses 1, 2, 3, and 5 sufficient for their purposes. Students with Zoölogy as a major and medical students are advised to begin work in Zoölogy in their first year. The student may begin with either Course 1, 4, or 5, but all students who have this subject for their major must at some time take Course 1. Courses 9, 10, 11, 12, and 13 are intended for advanced undergraduates or graduates.

A knowledge of German and French is indispensable for the more advanced work in Zoölogy and will be a great aid from the beginning. Students are urged to present, if possible, one or both these languages for entrance and to continue their study in college, so as to be able to read biological literature by their Junior year.

Under the description of each course are given the names of several books for reference which are found in the library and will be of especial value in connection with the given course.

1. **Elementary Zoölogy.** A study of types (Amoeba, Paramoe-

cium, Sponge, Hydra) of the lower classes of animals with reference to structure, functions, and relationships, and of the cell and cell-division. Laboratory work supplemented by lectures on the physiology of the cell and on the biology and classification of the Protozoa and Coelenterata.

Prerequisite: Satisfactory evidence of ability to write clear, forcible English. Senior preparatory students must receive special permission from the instructor before electing the course.

Parker: Elementary Biology.

Wilson: The Cell in Development and Inheritance.

Hertwig: The Cell.

Sedgwick and Wilson: Elementary Biology.

Fall, Lectures M., W. at 8. Laboratory work, six hours a week at hours to be arranged, in the forenoons.

2. **Elementary Zoölogy.** Continuation of Course 1, studying the Earthworm, and beginning the study of the structure and development of the Frog, as an introduction to vertebrate zoölogy.

Prerequisite, Course 1.

Ecker's Frog (preferably Gaup's edition).

Marshall: Embryology.

Parker and Haswell: Zoölogy, Vol. II.

Winter, Lectures M., W. at 8. Laboratory work, six hours a week, forenoons.

3. **Elementary Zoölogy.** Continuation of Course 2.

Prerequisite: Course 2 or 4.

Spring, Lectures M., W. at 8. Laboratory work, six hours a week, forenoons.

4. **Introduction to Vertebrate Zoölogy.** The structure and development of the frog, and the classification of vertebrates.

Prerequisite: The same as for Course 1.

Winter, Lectures F. at 8. Laboratory work, eight hours a week, forenoons.

5. **The Evolution of Species.** A presentation of the evidences of evolution, with an account of the current theories. Illustrated lectures. This course may be taken as an introduction to all other courses in Zoölogy, or at any later time. Advanced students and students who have had one year of Zoölogy may elect this as a full course, by special permission. To others it is a half course. The lectures are open to all, whether taking the course for credit or not.

Fall. Two lectures a week, at an evening hour. Those taking it as a full course will have an additional lecture and a quiz on assigned reading at a morning hour to be arranged.

6. **General Physiology.** Experimental study of the physiology

of the Protozoa, with lectures and assigned reading on the structure and functions of the cell.

Prerequisite: Courses 1 and 2.

Verworn: General Physiology.

Davenport: Experimental Morphology. Fall, 1901.

7. **Invertebrate Zoölogy.** A study of the structure, development, relationships, habits and distribution of invertebrate animals, with especial reference to the principles of organic evolution.

Prerequisite: Courses 1, 2, and 3.

Parker and Haswell: Zoölogy, Vol. I.

Lang: Comparative Anatomy of Invertebrates.

Korscheldt and Heider: Comparative Embryology of Invertebrates.

McMurrich: Invertebrate Morphology. Winter, 1902.

8. **Invertebrate Zoölogy.** Continuation of Course 7.

Spring, 1902.

9. **Vertebrate Embryology.** Laboratory work on the maturation, fertilization and cleavage of the ovum, and on the development of the chick; lectures on the comparative embryology of vertebrates.

Prerequisite: Course 3.

Fall, Lectures Tu., Th. at 8. Laboratory work, eight hours, forenoons.

10. **Comparative Anatomy of Vertebrates.** Laboratory study of types of vertebrates (Lancelet, Lamprey, Skate, Perch, Water-dog [Cryptobranchus], Turtle, Pigeon, Rabbit), with lectures on the comparative anatomy of vertebrates, with especial reference to the factors in the progressive modification of organs. This course is intended to give the medical student a broad foundation for the study of human anatomy, and to prepare the special student in Zoölogy for advanced studies in the line of vertebrate morphology.

Prerequisite: Course 9.

Wiedersheim: Comparative Anatomy (English Translation).

Parker and Haswell: Zoölogy, Vol. II.

Reynolds: The Vertebrate Skeleton.

Parker: Zoötomy.

Winter, Lectures Tu., Th. at 8. Laboratory work, eight hours, forenoons.

11. **Comparative Anatomy of Vertebrates.** Continuation of Course 10.

Spring, Lectures Tu., Th. at 8. Laboratory work, eight hours, forenoons.

12. **Vertebrate Nervous System.** This course is devoted chiefly to the comparative study of the minute anatomy of the central nervous system of vertebrates and the morphology of the cranial

nerves. The student will dissect the brain and cranial nerves of several types of vertebrates, and will prepare and study serial sections of the brains of a fish, amphibian, and reptile. He will receive instruction in modern methods of neurological investigation. The lectures will deal with the minute structure of the brain, the terminal organs and their influence on brain structure.

Prerequisites: Courses 9, 10, and 11, and a working knowledge of French or German.

Edinger: Vorlesungen über den Bau der nervösen Centralorgane. 5th. Aufl.

Cajal: Nouvelles Idees sur la Structure du Systeme Nerveux.

Donaldson: The Growth of the Brain.

Obersteiner: Anleitung beim Studium des Baues der nervösen Centralorgane.

Van Gehuchten: Anatomie du Systeme Nerveux de l'homme.

Fall. Hours to be arranged.

13. **Vertebrate Nervous System.** Continuation of Course 12. This course will deal especially with the minute structure of the human brain. Winter. Hours to be arranged.

14. **Mammalian Anatomy.** Dissection of the cat. The course is intended as an introduction to human anatomy and physiology, or as a general culture course for those who can not pursue human dissection. Laboratory work, quizzes, and lectures or demonstrations. Prerequisite: Course 3. Fall. Hours to be arranged.

15. **Mammalian Anatomy.** Continuation of Course 14.

Winter. Hours to be arranged.

16. **Mammalian Anatomy.** Continuation of Course 15.

Spring. Hours to be arranged.

18. **Field Work.** Field excursions and laboratory work with reading and occasional lectures on the principles of classification and the distribution of animals. The work will consist in the collection, indentification and preservation of specimens of the local fauna, and recording observations on the habits and time and place of occurrence of animals in the vicinity of Morgantown. The aim will be to interest the student in the general problems of Zoölogy and in the materials and methods for their solution. Open only to those who receive special permission. Spring.

20. **Research Work.** Properly qualified students may undertake research upon the anatomy or development of vertebrates or invertebrates. At least two years of zoölogical work and a reading knowledge of French and German are prerequisite.

21. **Current Literature.** A Journal Club for the consideration of the current literature of Zoölogy will be formed as soon as there are enough advanced students to undertake it.

Anatomy.

Professor Hartigan.

1. **Anatomy.** This course will consist of a thorough study of the skeleton and of the single bones through one quarter, an adequate supply enabling the student to study the actual bones as well as the text-book. Daily recitations and demonstrations. Prerequisites, French 6, German 6, Physics 2, and Zoölogy 11. Fall, 9:00.

2. **Anatomy.** The articulations and the muscles will be studied by text, demonstrations and dissection. Prerequisite, Anatomy 1. Winter, 9:00.

3. **Anatomy.** The circulatory system and some of the viscera are studied during the third quarter of the third year. Dissection is carried on through the second and third quarters until one lateral half of the body has been studied and demonstrated by the student to the satisfaction of the instructor. Prerequisite, Anatomy 2. Spring, 9:00.

4. **Anatomy.** The remainder of the viscera and part of the nervous system will be covered in this course; methods of study as outlined above. Prerequisite, Anatomy 3. Fall, 10:00.

5. **Anatomy.** The nervous system is completed and the organs of the special senses are studied. Prerequisite, Anatomy 4. Winter, 10:00.

6. **Anatomy.** Surgical and regional anatomy, surface landmarks, etc., will be taught for half the quarter. In this work the living model will be used as much as possible. Embryology (human) will occupy the second half. Prerequisite, Anatomy 5. Spring, 10:00.

Physiology.

1. **Physiology.** The subject is begun in the second quarter of the third year, after the student has had one quarter in Anatomy and the same in Histology. The physiology of the cells, the tissues and the blood is taught by recitations, lectures and laboratory methods. Prerequisites, Anatomy 1, Histology 1. Winter, 11:00.

2. **Physiology.** The heart and blood vessels, blood pressure, vasomotor phenomena, and pulmonary and tissue respiration are taught as above. Prerequisite, Physiology 1. Spring, 11:00.

3. **Physiology.** The first quarter of the fourth year is devoted to the study of digestion, absorption and excretion. Prerequisite, Physiology 2. Fall, 9:00.

4. **Physiology.** The subjects treated in this quarter are tissue metabolism, the locomotor mechanism and the special senses. Prerequisite, Physiology 3. Winter, 9:00.

5. **Physiology.** The functions of the nervous system and the physiology of reproduction complete the course. It will be noticed

that the work in Anatomy and Physiology makes each the supplement of the other, so that the student acquires a knowledge of function while engaged upon the study of structure. Prerequisite, Physiology 4. Spring, 9:00.

Text and reference books:

Anatomy: Gray, Morris, American Hand-book, Sharpey and Quain, Holden's Osteology.

Physiology: Foster, Kirke, Landois and Stirling, American Hand-book.

Embryology: Hertwig, Minot, Balfour (Comparative).

Histology, Pathology, Bacteriology and Materia Medica.

Professor Thayer.

Histology.

1. **Histology.** This course teaches the student the varieties of animal and human cells and tissues in the normal condition, and also the various methods employed in their study. Each student is expected to make a collection of 150 to 200 slides for future use. Prerequisites, French 6, German 9, Zoölogy 11. Laboratory.

Fall, 10:00; 1 U.

2. **Histology.** Students who have displayed interest and ability may carry on more advanced work in the normal tissues. Laboratory. Prerequisite, Histology 1. Hours to be arranged.

Pathology.

1. **Pathology.** A lecture course in General Pathology with demonstrations where practicable. As much as possible of the field of Comparative Pathology is covered, although the course is designed strictly for prospective physicians, and human diseases are the chief object of study. Prerequisite, Histology 1.

Winter, 10:00; 1 U.

2. **Pathology.** Ample material has been provided to give a complete laboratory course in morbid human tissues. The student makes a collection of 150 slides and studies them. Prerequisites, Histology 1, Pathology 1. Spring, 10:00; 1 U.

3. **Pathology.** A special course in Experimental Pathology will be given to advanced students in limited numbers. This may be taken as an elective course in preparation for a thesis. Prerequisite, Pathology 2. Hours to be arranged

Materia Medici.

1. **Materia Medica.** Drugs, their properties, preparations and doses will be taught by recitations, lectures, and laboratory. The ground covered in this course includes the chief inorganic drugs and the antiseptics. A cabinet of the most important medicines has been

formed to assist the student in his work. Prerequisites, Botany 5, Anatomy 3, Physiology 2, Pathology 2, Latin 6, French 6, German 9. Fall, 11:00; 1 U.

2. **Materia Medica.** In this course the text-book (provisionally Bartholow, 10th Edition) will be completed, and the regular recitations supplemented by lectures, which will form a larger proportion of the course than in Materia Medica 1. Prerequisite, Materia Medica 1. Winter, 11:00; 1 U.

3. **Materia Medica.** This course is practical as far as possible, including the application of healing agencies of all kinds, with assistance derived from the methods of clinical diagnosis. The instruction will be given by lectures, recitations, and the free use of the chief domestic and foreign periodicals. Each student will be required to make frequent reports before the class of recent therapeutic advance and take part in the discussion of the subjects presented. Prerequisite, Materia Medica 2. Spring, 11:00; 1 U.

Bacteriology.

1. **Bacteriology.** A course of actual laboratory work of two hourse daily duration during one quarter, supplemented by lectures and informal talks. The preparation of culture media, the methods of detection and identification of bacteria, and the verification of results by experiment, with the delicate and complicated technique involved, will be thoroughly taught, and, as in Histology 1 and Pathology 2, the student makes a collection of typical specimens. Prerequisites, Histology 1, Pathology 2, Botany 5. Fall, 1:30; 1 U.

2. **Bacteriology.** A course, chiefly consisting of lectures, on the important subjects of Hygiene and Sanitation, with especial reference to the applications of Bacteriology in the entire field. Elective. Hours to be arranged.

Synoptic Lectures.

History of Medicine. During the Spring Quarter of 1900 a series of lectures on the History of Medicine will be given, one each week, open to all students and their friends. Monday, 7:00; 23 S.

Vital Statistics and Public Health. One lecture a week during the Summer Quarter.

Laboratory Fees.

In Histology 1, Pathology 2, and Bacteriology 1, a laboratory fee of five dollars will be charged in each case, to cover the cost of slides, cover glasses and expensive reagents and the inevitable breaking of glassware and apparatus.

Books.

The following books are recommended as text or reference:

Histology, *Stöhr, Clarkson.

Pathology, *Ziegler, *Delafield and Prudden, Orth.

Bacteriology, *Abbott, Sternberg, Flugge.
Materia Medica, *Bartholow, Potter.
Pharmacology, *Cushny.
Therapeutics, *Hare, Ringer.
Urinalysis, Purdy.
Medical Dictionary, Gould, Duane, Dunglison, Billings.
U. S. Dispensatory.
Pharmacopœia.

In every case the latest edition should be bought. In the above list, the books marked with a star will be used as text-books, and others for reference. As the University library contains them all, the student should familiarize himself with them at his convenience; those which he needs may be purchased at about cost through the University Book Store.

Botany.

Assistant Professor Copeland.

1. **Elementary Laboratory Botany.** This is a laboratory course, with dissecting and compound microscopes, and including some simple experiments. A text book will be used only for a general guide. Fall, Winter, 1:30; 30 U.

2. **Elementary Field Botany.** This course is chiefly outdoor work, and will include practice in the determination of vascular plants with Gray's Manual. Spring, Summer, 1:30; 30 U.

A single admission credit in Botany will not be accepted. Candidates for admission to the University who have completed the equivalent of one of these courses may take the other here and be credited with both. Either may precede the other, but they should be taken in successive quarters.

3. **The Algae.** The algae will be studied along physiological as well as morphological lines. Being the simplest typical plants they are well adapted to serve as material for a thorough introductory study of the plant cell. One or two lectures weekly and eight or six hours laboratory work with microscope. Fall; 30 U.

4. **Fungi and Bryophytes.** A study of the morphology and taxonomy of these groups. One lecture and eight hours laboratory work. Prerequisite, Course 3. Winter; 30 U.

5. **Vascular Plants.** This course will be in considerable part laboratory work, bringing out the relation of the flowering plants to the lower groups with some field work. One lecture weekly, and four laboratory periods. Prerequisite, Course 4. Spring; 30 U.

6. **The Epidermal and Fundamental Tissues.** A study of the structure and functions of the tissues of these two systems, with an introduction to histological methods. No text. Prerequisite, Course 5. Fall; 30 U.

7. **The Fibrovascular System.** A study of the conducting tissues of plants along the lines outlined under Course 6, which is a prerequisite. Winter; 30 U.

8. **Cytology.** A study of the protoplasm and its parts, with exercise in the technique of hardening, staining, etc. Prerequisite, Course 7. Spring; 30 U.

9. **Physical Physiology.** A study of the physical properties of plants and of the processes which depend essentially upon physical actions, as imbibition, osmosis, transpiration. No text. One or two lectures weekly, and laboratory experiments. Students must be ready to work at extra or unusual hours if the experiments demand it. Prerequisites, Botany 8, four courses of Chemistry and Physics, three of Zoölogy, and ability to read scientific German. Fall; 30 U.

10. **Chemical Physiology.** Experiments on the nutrition and respiration of plants, with two lectures weekly. Prerequisite, Course 9. Winter; 30 U.

11. **Growth and Irritability.** This course completes the class study of vegetable physiology. One lecture weekly and experiments. Prerequisite, Course 10. Spring; 30 U.

13. **Teacher's Course.** This is a one term resumé covering the ground to which at least two terms should be devoted in the preparatory schools. Two lectures a week on general Botany, with laboratory and field work. No previous Botany required.

Summer; 30 U.

15. **Lectures on Physiology.** This course is illustrated by experiments. Given in 1900. One-half course.

Winter, Tuesday and Thursday, 2 P. M.; 30 U.

16. **Local Ecology.** A study of the relationship of native plants to their environment. Prerequisite, ability to determine flowering plants. Summer; 30 U.

17. **Cryptogamic Short Course.** Lectures and laboratory and field work on the chief groups of flowerless plants. Prerequisite, Botany 2 or its equivalent. Summer; 30 U.

20. **Research.** Students prepared to do original work in physiology or histology will be given such laboratory facilities as their work demands and credit will be given in proportion to the amount of work accomplished.

All lectures in Botany will be given at 2 P. M., unless otherwise arranged. Laboratory work is confined to the afternoon, except when advanced enough so that constant supervision is unnecessary. The work of majors in Botany is Courses 3-11, and 20.

MEDICINE.

The A. B.-Medical Course.

This is a four years course leading to the Degree of Bachelor of Arts, including two years of medical study.

One of the greatest advances in recent medical education is the requirement on the part of medical schools that the degree of M. D. shall represent a certain amount of general culture as well as four years devoted to the study of medical subjects. With this tendency the West Virginia University is thoroughly in accord; and the pre-medical course, formerly consisting of two years work in medical branches, has, therefore, been revised and extended to cover the first two years of a general scientific college course as well as the first two years of a medical course. The medical studies come in the last two years of the course after the student has laid a solid foundation for medical work in the preliminary scientific studies of the first two years of the course. He will then graduate with the degree of A. B. and a certificate of two years of medical study. An effort will be made to establish such relations with Medical Colleges that these two years will be counted everywhere as the equivalent of the first two years in a medical school. Thus the student will be able to complete half his medical course where expenses are low, where the classes are small and each student receives the professors' personal attention, and under the broadening influence of a university. When the student's theoretical training has been in great part completed he will be prepared to go to the medical school and profit by the clinical advantages there offered. Since some of the foremost schools of medicine are about to demand a college degree of all candidates for admission, the advantages of the plan suggested are at once apparent.

By arranging a preparatory course of four years with the idea that it shall lead up to the A. B.-Medical course, the University has established a course of eight years of preparatory and collegiate work which does not exclude general culture and yet bears the final purpose always in mind, thus enabling the student to specialize in scientific and medical lines almost from the time of his entrance.

Admission to the A. B.-Medical Course.

Candidates for admission must present certificates of good moral character, and if from other colleges or universities must bring letters of honorable dismissal.

Candidates for admission to the A. B.-Medical Course will be required to have completed the following preparatory work:

English,	9 courses;
Latin,	6 courses;
French,	6 courses;
German,	6 courses;
History,	2 courses;
Civics,	1 course;
Algebra,	2 courses;
Plane Geometry,	2 courses;
Physics,	2 courses;
Chemistry,	3 courses;
Total,	39 courses.

A "course" represents the amount of work done by a class meeting five times a week for one quarter (twelve weeks).

These preparatory studies may be taken at the Preparatory School of the University at Morgantown or elsewhere.

A. B.-Medical Preparatory Schedules.

Two schedules have been arranged for this work in the Preparatory School of the University at Morgantown:

1. A four years schedule for those who take all the preparatory work at the Preparatory School of the University, and who are not able to carry more than three courses during the first three years of the course;

2. A three years schedule for those who have already completed the equivalent of three courses in English and are able to carry four courses during the three years.

1. Schedule Arranged for Four Years.

FIRST YEAR.

HOUR.	FALL.	WINTER.	SPRING.
8:00	English 1	English 2	English 3
9:00	English History 5	U. S. History 6	Civics 1
11:00	Latin 1	Latin 2	Latin 3

SECOND YEAR.

10:00	Latin 4	Latin 5	Latin 6
11:00	English 4	English 5	English 6
12:00	French 1	French 2	French 3

THIRD YEAR.

8:00	Algebra 1	Algebra 2	Plane Geometry 1
9:00	German 1	German 2	German 3
12:00	French 4	French 5	French 6

FOURTH YEAR.

8:00	German 4	German 5	German 6
9:00	Chemistry 1	Chemistry 2	Chemistry 3
10:00	English 7	English 8	English 9
11:00	Plane Geometry 2	Physics 1	Physics 2

2. Schedule Arranged for Three Years.

FIRST YEAR.

8:00	Latin 1	Latin 2	Latin 3
9:00	English History 5	U. S. History 6	Civics 1
10:00	English 4	English 5	English 6
12:00	French 1	French 2	French 3

SECOND YEAR.

8:00	Algebra 1	Algebra 2	Plane Geometry 1
9:00	German 1	German 2	German 3
10:00	Latin 4	Latin 5	Latin 6
12:00	French 4	French 5	French 6

THIRD YEAR.

8:00	German 4	German 5	German 6
9:00	Chemistry 1	Chemistry 2	Chemistry 3
10:00	English 7	English 8	English 9
11:00	Plane Geometry 2	Physics 1	Physics 2

The figures after the names of the studies indicate the numbers of the courses as described in the announcements of the Preparatory School.

Each class meets five times a week, Mondays to Fridays, inclusive.

The A. B.-Medical Course.

The four years A. B.-Medical Course includes the following forty-two college courses, each course representing the amount of work done by a class meeting five times a week for one quarter (twelve weeks):

Zoölogy	6 courses	(2 years)
Chemistry	4 "	(2 ")
Botany	3 "	(1 year)
German	3 "	(1 year)
Electives	4 "	(1⅓ ")
Preferably :		
General Hygiene		
Domestic "		
Public "		
Anthropology		
Anatomy	6 courses	(2 years)
Anatomical Laboratory	3 courses	(1 year)
Physiology	5 "	(1⅔ years)
Histology	1 "	(⅓ year)
Pathology	2 "	(⅔ ")
Materia Medica	3 "	(1 ")
Bacteriology	1 "	(⅓ ")
Research and Thesis	1 "	(⅓ ")
Total,	42 Courses.	

These courses may be taken in four years according to the following

Four Years Schedule for A. B.-Medical Course.

FIRST YEAR.

HOUR.	FALL.	WINTER.	SPRING.
8:00	Zoölogy 1	Zoölogy 2	Zoölogy 3
10:00	German 10	German 11	German 12
11:00	Elective (General Hygiene)	Elective (Domestic Hygiene)	Elective (Public Hygiene)
1:30	Chemistry 4	Chemistry 5	Chemistry 7

SECOND YEAR.

8:00	Zoölogy 9	Zoölogy 10	Zoölogy 11
10:00	Chemistry 11	Chemistry 12	Chemistry 13
1:30	Botany 3	Botany 4	Botany 5

THIRD YEAR.

8:00	Anthropology		
9:00	Anatomy 1	Anatomy 2	Anatomy 3
10:00	Histology 1	Pathology 1	Pathology 2
11:00		Physiology 1	Physiology 2
1:30		Anatomy Laboratory	Anatomy Laboratory

FOURTH YEAR.

9:00	Physiology 3	Physiology 4	Physiology 5
10:00	Anatomy 4	Anatomy 5	Anatomy 6
11:00	Materia Medica 1	Materia Medica 2	Materia Medica 3
1:30	Bacteriology and Hygiene	Anatomy Laboratory	Research and Thesis

Throughout the final quarter of the last year the student will carry on research work in some one of the laboratories; the results he will present in his thesis, which, if deemed worthy, will be published.

Journal Clubs.

A further discipline of great practical value in the training of the physician is found in the Journal Clubs maintained in connection with the Chemical, Biological and Medical Laboratories.

As the student is required to have a reading knowledge of both French and German, the files of the foreign periodicals and the text and reference works in these languages in the University Library, are available for constant study and reports by the students. Such use of the literature of the subjects taught is required in each of the scientific departments, which enables the student to learn how to use a library, to keep up with the advance of science, and also to inform himself as to the methods of research.

A more detailed statement of the purely medical work of the third and fourth years, together with the separate descriptions of the courses on the preceding pages, will show the extent and coördination of the various studies.

THIRD YEAR.

HOUR.	FALL.	WINTER.	SPRING.
8:00	Anthropology		
9:00	Anatomy throughout the year, viz.—		
	Osteology	Arthrology Myology	Angeiology Splanchnology
10:00	Histology Laboratory Course	General Pathology Lecture Course	Special Pathology Laboratory Course

11:00	Physiology throughout two quarters, viz.—	
	Cytology, Histology, Blood, Neuro-Muscular.	Circulation Respiration
1:30	Anatomy Laboratory, one course in each of two quarters; one lateral half of the body dissected and demonstrated.	

FOURTH YEAR.

9:00	Physiology throughout the year, viz.—		
	Digestion	Tissue Metabolism	Nervous System
	Absorption	Locomotor Mechanism	Reproduction
	Excretion	Special Senses	
10:00	Anatomy throughout the year, viz.—		
	Splanchnology	Neurology	Surgical Anatomy
	Neurology	Special Senses	Embryology
11:00	Materia Medica throughout the year, viz.—		
	Drugs, preparations, doses, etc., through Antiseptics.	Text Book finished	Therapeutics, Prescription Writing, Review of principal drugs.
1:30	Bacteriology and Hygiene, Laboratory	Anatomy Laboratory One half the body dissected.	Research and Thesis

PHARMACY.

The proper place of drugs and of the dispensers of drugs is a much discussed question in modern medical literature, but with the present increasing tendency toward specialization and toward raising the standard of medical training, it seems certain that the thoroughly efficient and capable pharmacist who keeps pace with the advancement of therapeutic medicine and the allied sciences will become a more and more necessary part of the medical profession.

The efficiency of the pharmacist is, however, an all important point. The registered pharmacist should not only be able to fill prescriptions with accuracy and intelligence, but he should also be able to ascertain the quality and degree of purity of the drugs and chemicals from which the prescriptions are filled. He should further be competent to make for physicians such chemical and microscopical examinations as the latter may have neither the time nor facilities for making. Lastly, the progressive pharmacist should be able to keep pace with the advance which will certainly be made in the pharmaceutical sciences during the coming three or four decades. In order to do this he must not only have a clear and exact knowledge of chemistry and certain branches of the biological sciences, but he must also be thoroughly conversant with one or two modern languages besides English, especially with the language of the sciences, German.

The Course in Pharmacy offered at the West Virginia University has been planned to meet the above requirements, and it must be emphasized that no student will be permitted to graduate who has not fulfilled them.

Admission to the Pharmacy Course.

The conditions of admission to the Course in Pharmacy are the same as the conditions of admission to the courses leading to the degree of Bachelor of Arts; but no student can complete the course in Pharmacy unless his preparatory work has included nine courses in English, six courses in German, and six courses in Latin. It is expected that the Bachelor of Science in Pharmacy shall be an older and more mature student than the average college graduate, since his training is not only educational but also professional. Students

who expect to take the course in Pharmacy are advised to first complete the following preparatory work:

English,	9 courses;
Latin,	6 courses;
French,	6 courses;
German,	6 courses;
Algebra,	3 courses;
Plane Geometry,	2 courses;
History,	3 courses;
Physics,	2 courses;
Free Hand Drawing,	2 courses.

These studies can be taken in the Preparatory School according to the schedule outlined below.

HOUR.	FALL.	WINTER.	SPRING.
		FIRST YEAR.	
8:00	Algebra 1	Algebra 2	Algebra 3
9:00	English 1	English 2	English 3
11:00	Latin 1	Latin 2	Latin 3
		SECOND YEAR.	
10:00	Latin 4	Latin 5	Latin 6
11:00	English 4	English 5	English 6
12:00	French 1	French 2	French 3
		THIRD YEAR.	
9:00	German 1	German 2	German 3
10:00	Fr. Hd. Draw. 1	Fr. Hd. Draw. 2	Plane Geom. 1
12:00	French 4	French 5	French 6
		FOURTH YEAR.	
8:00	German 4	German 5	German 6
9:00	English History	U. S. History	Civics
10:00	English 7	English 8	English 9
11:00	Plane Geometry 2	Physics 1	Physics 2

Exceptionally mature and capable students and students who have satisfactorily passed one year's work in Latin and in Algebra may be able to complete the above preparatory work in three years.

The Pharmacy Course.

The course in Pharmacy leading to the degree of B.S. in Pharmacy, is to cover four years. It will include the following studies:

German,	3 courses;
Botany,	6 courses;
Zoölogy,	3 courses;
Physiology,	3 courses;
Bacteriology,	1 course;

Chemistry,	12 courses;
Materia Medica,	3 courses;
Pharmacognosy,	1 course;
Theoretical Pharmacy,	3 courses;
Electives,	3 courses;
Thesis,	1 course;
Study of current scientific literature,	3 courses;
	42 courses.

These courses may be taken according to the following schedule:

FIRST YEAR.

HOUR.	FALL.	WINTER.	SPRING.
9:00	Chemistry 1	Chemistry 2	Chemistry 3
10:00	German 10	German 11	German 12
1:30- 3:30	Botany 3	Botany 4	Botany 5

SECOND YEAR.

8:00-10:00	Zoölogy 1	Zoölogy 2	Zoölogy 3
10:00-12:00	Chemistry 14	Chemistry 15	Chemistry 16
1:30- 4:30	Chemistry 4	Chemistry 5	Chemistry 9

Study and reports of current literature.

THIRD YEAR.

8:00	Anthropology or other Elective	Ethnology or other Elective	Elective
10:00-12:00	Chemistry 11	Chemistry 12	Chemistry 13
12:00	Physiology 1	Physiology 2	Physiology 3
2:00- 4:00	Botany 6	Botany 7	Botany 8

Study and reports of current literature.

FOURTH YEAR.

8:00			Pharmacognosy
9:00-11:00	Pharmaceutical Technique	Theoretical and Pract. Pharmacy	Theoretical and Pract. Pharmacy
11:00	Materia Medica 1	Materia Medica 2	Materia Medica 3
1:30- 3:30	Bacteriology	Thesis	Thesis

Abstracts and discussion of current literature.

Pharmacognosy.

A course will be given in the recognition of crude drugs, the varieties and sources of the substances used as medicines, and the detection of adulterations. The drug cabinet contains about two hundred selected specimens of crude drugs as bark, seed, leaf, root, gum, etc., and this will be enlarged as required. Constant study of

the dispensatory, trade lists, and drugs as they occur in commerce, will train the student in the actual work of drug sampling and buying.

Theoretical and Practical Pharmacy.

Constant study of the best American and German Pharmacopœias and the best pharmaceutical literature will be required throughout these courses. The laboratory work will be entirely individual and will consist of such strictly pharmaceutical work as the students have not learned in the courses in pure Botany and Chemistry. The analysis of drugs, the preparation of medicines from crude drugs, the filling of prescriptions, etc., will take up all time that can be spared for such purposes throughout the last year, and aside from the regular hours, the laboratory will be open to the students of Pharmacy during the afternoons for such work.

Theses.

During his college course, the student of Pharmacy is expected to acquire some facility in reading critically the current literature (English, French, German) which has direct bearing upon theoretical and practical Pharmacy. As evidence of sufficient maturity in this work, the student will be required to produce before graduation a thesis on some pharmaceutical subject. This thesis must contain an adequate review of the work of previous investigators and the report of personal investigations on the subject. The thesis will count as one full course, and the student is expected to give to the investigations not less than four hours laboratory work per week during each of the last two quarters before graduation.

DOMESTIC SCIENCE.

Assistant Professor Clark and Miss Moreland.

The unique functions of the home and its importance as a fundamental social institution render its effective organization one of the greatest social tasks. Domestic Science has for its province the correlation of such knowledge bearing on this task as has been gained by the sciences of Sociology, Economics, Physics, Chemistry, Biology, and Sanitation, and its application in the household arts. To this end it considers such problems as: the conditions necessary for a sanitary home, the soil, ventilation, sewerage, heating, etc.; the selection of food with reference to its nutritive and economic value, and its proper preparation; economic domestic administration, family budgets, domestic service; and the sanitation of groups of homes, i. e., communities and states.

Throughout the country there is a growing interest in the subject of healthful living, its conditions, and the means of fulfilling them. Intelligent men and women are asking questions and seeking directions, but there are as yet few who can satisfy them, because few have studied the subject. Thoroughly trained students in this department are being vainly sought as teachers in public and private schools and in colleges, as officers of administration in charitable institutions, as directors of diet kitchens, as members of school boards and village improvement societies, as philanthropic workers, and as sanitary inspectors. This demand the University can now satisfy to some extent by offering a course which affords an opportunity to secure thorough preparation for such positions.

The department offers work to two classes of students: first, those who desire to take advantage of such openings as those referred to above, and who therefore make Domestic Science their major subject during a four years course; and second, those who simply wish to take one or more courses in the subject as electives. The first group will lay the foundations for the applied work in Domestic Science, in a broad study of natural science, together with modern languages, History, and Sociology. The second group may elect freely the courses they desire.

The department is supplied with all needed reference books and periodicals, the Pratt Institute food charts and food museum, and a well equipped laboratory kitchen.

1. **General Hygiene.** This is introductory to Course 2, though complete in itself. Questions relating to the health of the individual are considered: the care of lungs, skin, eyes, digestion, the development of the body by indoor and outdoor exercise, the conservation of nervous and muscular force, and the conditions favorable for physical and intellectual work. Lectures and assigned readings.

Fall, 11:00.

2. **Home Sanitation.** The house: site, architecture, construction, plumbing and sewerage, heating, lighting and ventilation, furnishing, decorating, cleaning. Lectures, topical investigation and inspection of houses. Winter, 11:00.

3. **Public Hygiene.** Among the subjects discussed are: the care of streets and alleys, system of sewage and garbage disposal, the inspection of food supplies, the prevention of epidemics, building and plumbing regulations, sanitary regulations. Lectures and research work. Spring, 11:00.

4. **Food Materials.** The sources of food supplies, composition and nutritive value of foods; adulterations. Lectures with the use of charts, models, etc.

Half course. Summer, 1900, 12:00; Fall, M. and W., 2:00.
Spring, M. and W., 2:00.

5. **Selection of Foods.** A continuation of Course 4. The cost of food materials, national foods, dietaries, the chemistry of the preparation of food. Prerequisite, Domestic Science 4.

Half course. Winter, M. and W., 2:00.

6. **Household Economics.** The organization of the household, domestic service, household expenditure, comparative study of family budgets, marketing. Fall, 10:00.

7. **Principles of Cooking.** This course is intended to illustrate the application of heat to foods and to show the value of staple foods. Course 4 must accompany this. Half course. Summer, 1900, 2:00.
Fall, T. and Th., 2:00. Spring, T. and Th, 2:00.

8. **Advanced Cooking.** A continuation of Course 7. The preparation of more elaborate dishes and of entire meals. Prerequisite, Domestic Science 7. Course 5 must accompany this.

Half course. Winter, T. and Th., 2:00.

9. **Household Art and Architecture.** The principles of house architecture with historical illustrations; the examination of house plans with reference to their beauty and convenience; a study of decoration and furniture. Spring, 10:00.

Admission to the Domestic Science Course.

The conditions of admission to the Domestic Science Course are the same as for admission to the other courses leading to the degree of Bachelor of Arts; but students who wish to take the Domestic

Science Course are advised to shape their preparatory course so as to include the following courses:

English,	9 courses;
Latin,	3 courses;
German,	6 courses;
French,	6 courses;
History,	2 courses;
Civics,	1 course;
Mathematics,	5 courses;
Physics,	2 courses;
Chemistry,	3 courses;
Botany,	2 courses.
Total,	39 courses.

Preparatory Schedule.

This preparatory work can be taken according to the following schedule:

HOUR.	FALL.	WINTER.	SPRING.
		FIRST YEAR.	
8:00	Algebra 1	Algebra 2	Algebra 3
9:00	English 1	English 2	English 3
11:00	Latin 1	Latin 2	Latin 3
		SECOND YEAR.	
8:00			Plane Geometry 1
9:00	English History	U. S. History	Civics
10:00	English 4	English 5	English 6
11:00	French 1	French 2	French 3
		THIRD YEAR.	
9:00	German 1	German 2	German 3
10:00	French 4	French 5	French 6
11:00	Plane Geometry 2	Physics 1	Physics 2
		FOURTH YEAR.	
8:00	German 4	German 5	German 6
9:00	Chemistry 1	Chemistry 2	Chemistry 3
10:00	English 7	English 8	English 9
1:30		Botany 1	Botany 2

While real equivalents will be accepted for admission to college as substitutes for the above preparatory studies, the college course in Domestic Science outlined below is arranged for students who have had the preparatory studies mentioned above. College students in the Domestic Science course who have not presented for admission to college all the above preparatory studies will substitute for some of the studies in the Domestic Science course outlined below the above preparatory studies which they have not previously had.

The Domestic Science Course,

Leading to the Degree of A. B.

First Year.

HOUR.	FALL.	WINTER.	SPRING.
8:00	Zoölogy 1	Zoölogy 2	Zoölogy 3
11.00	History 7	History 8	History 9
1:30	M. & W. Physics 4	Physics 4	Physics 4
1:30	Tu. & Th. Chem. 4	Chemistry 5	Chemistry 8
4:00	Phys. Training	Phys. Training	Phys. Training.

Second Year.

10:00	Phys. Chemistry 11	Phys. Chemistry 12	Phys. Chemistry 13
12:00	History 11	History 12	History 18
1:30	Botany 3	Botany 4	Botany 5
4:00	Phys. Training	Phys. Training	Phys. Training

Third Year.

8:00			Rhetoric 1
9:00	Economics 1	Economics 2	
11:00	Domestic Science 1	Domestic Science 2	Domestic Science 3
12:00	Gen. Physiology 1	Gen. Physiology 2	Gen. Physiology 3
2:00	M. & W Dom. Sci. 4	Domestic Science 5	
2:00	T. & Th. Dom. Sci. 7	Domestic Science 8	
4:00	Phys. Training.	Phys. Training	Phys. Training

Fourth Year.

8:00	Sociology 1	Sociology 2	Sociology 3
9:00	Sociology 5	Sociology 6	Sociology 7
10:00	Domestic Science 6	Sociology 8	Domestic Science 9
11:00		Rhetoric 2	English Lit. 2

The course outlined above may be varied to meet individual needs; but students who make Domestic Science their major study are advised to follow it as nearly as possible.

FINE ARTS.

Mrs. Hubbard and Mr. Leonard.

The University provides a large, well lighted studio, containing drawing stands, easels, china kiln, etc., and a large collection of casts and models. Students also have access to the University Museum for study, and to the University Library for works on the history and development of art.

The regular classes in Drawing and the History of Art are open without charge to all students of the University, but for more advanced work in Crayon, and in the Painting classes, moderate fees are charged as follows:

For One Quarter (Twelve Weeks), Three Lessons Weekly:

Special Drawing	$5.00
Crayon	5.00
Water-Color	8.00
China Painting	8.00
Oil Painting	9.00
Pastel Painting	9.00

Students whose work is all in this department and who take only private work are not required to pay the usual University fees, but are entitled to all the privileges of the other University students—Library, lectures, etc. Fees are payable in advance to the Treasurer of the University, for the Art Fund.

Mr. Leonard.

1. **Elementary Drawing.** The historic forms of Art and their development. Lectures, with collateral reading and practice in drawing. Fall, 10:00; 12 S.

2. **Elementary Drawing.** A continuation of Course 1. Winter, 10:00; 12 S.

3. **Elementary Drawing.** A continuation of Course 2. Spring, 10:00; 12 S.

4. **Advanced Drawing.** Elements of Architecture, Sculpture, and Painting. Lectures, with collateral reading and practice in drawing. Fall, 11:00; 12 S.

5. **Advanced Drawing.** A continuation of Course 4. Winter, 11:00; 12 S.

6. **Advanced Drawing.** A continuation of Course 5. Spring, 11:00; 12 S.

7. **The History of Greek Art,** with a consideration of the arts of Egypt, Assyria, and Phoenicia in their relation to Greek Art.
Fall, 9:00.

8. **The History of Greek Art.** A continuation of Course 7.
Winter, 9:00.

9. **The History of Greek Art.** A continuation of Course 8.
Spring, 9:00.

Courses 7, 8, 9, and 10, 11, 12 will be given in alternate years. Not open to Freshmen.

10. **The History of Mediaeval and Modern Art,** with special consideration of the Renaissance period. Fall, 9:00.

11. **The History of Mediaeval and Modern Art.** A continuation of Course 10. Winter, 9:00.

12. **The History of Mediaeval and Modern Art.** A continuation of Course 11. Spring, 9:00.

Courses 10, 11, 12 will be omitted in 1900-1901.

Mrs. Hubbard.

13. **Perspective Drawing.** Elementary projection, orthographic and isometric. Linear perspective; principles studied and applied to the construction of arches, buildings, etc. Drawing of familiar objects. Designs of architectural ornament from the cast. Reference books, Minifie's "Mechanical Drawing," Trowbridge's "Perspective Drawing." Fall, 9:00; 12 S.

14. **Perspective Drawing.** A continuation of Course 13.
Winter, 9:00; 12 S.

15. **Perspective Drawing.** A continuation of Course 14.
Spring, 9:00; 12 S.

16. **Oil Painting.** Color analysis and combinations. Painting from still life, fruits, flowers, draperies, etc. Landscape painting. Study of the draped model. Hours to be arranged. 12 S.

17. **Pastel Painting.** The various studies of color and design suitable for expression in this medium. Special study for pastel portraits and the draped figures. Hours to be arranged. 12 S.

18. **Water-Color Painting.** Study from the flat and from nature, still life, landscape or model. Design from plant life and conventional. Figure and portrait painting. Hours to be arranged. 12 S.

19. **China Painting.** Study of colors and combinations. Painting from the flat. Study of design of flowers, landscapes, etc., leading to original designs. China burned in the studio kiln.
Hours to be arranged. 12 S.

The Regular Art Course.

This course of four years is so planned that the student may acquire not only the technique of drawing and painting, but also a general art education and a degree of æsthetic culture tending to develop individual powers of composition and art expression.

The work of the first year includes light and shade drawing from the antique, study of perspective, sketching from nature, drawings of still life, and study of form carried out in clay modeling.

The second year continues the drawing from cast in charcoal and crayon, copying the head, mask and ornament from the antique. Color studies in water-colors and oil are given alternating with the work in black and white.

During the third and fourth years the student copies the bust and full-length figure from the antique, paints from the draped model in the life class, and studies portrait painting and composition or sketching from nature and landscape painting.

Class lectures are given upon perspective, anatomy, composition, and art history. To those taking this course studio privileges for practice and special study will be given. The course includes painting in oil, water-color, pastel or china paints.

The Normal Art Course.

This course is designed for teachers in public or normal schools. It comprises free-hand drawing of ornament, mask, and head from the antique; study of still life; perspective and mechanical drawing; sketching; study of design; study of color and form developed in water-color painting and clay modeling.

Class lectures are given on the teaching of form and color, and the history of art.

Students should spend two years in pursuing this course; but to suit individual needs, the course may be shortened, and what is most essential will be given in the time available.

THE COLLEGE OF ENGINEERING AND THE MECHANIC ARTS.

Staff of Instruction.

The Faculty.

JEROME HALL RAYMOND, Ph.D., President of the University.

JOHN LINDSAY JOHNSTON, C.E., Professor of Civil and Mining Engineering.

FREDERICK LINCOLN EMORY, B.S., M.M.E., M.E., Professor of Mechanics and Applied Mathematics.

CLEMENT ROSS JONES, M.E., Assistant Professor of Mechanical Engineering.

RUSSELL LOVE MORRIS, C.E., Assistant Professor of Civil and Mining Engineering.

RUFUS WEST, Assistant in Metal Working.

Other Instructors Giving Courses in this College.

ALEXANDER REID WHITEHILL, Ph.D., Professor of Chemistry.

JAMES SCOTT STEWART, M.S., Professor of Mathematics.

SAMUEL B. BROWN, A.M., Professor of Geology and Mineralogy.

THOMAS EDWARD HODGES, A.M., Professor of Physics.

CHARLES HENRY PATTERSON, A.M., Professor of Rhetoric and Elocution.

OTTO FOLIN, Ph.D., Assistant Professor of Physiological Chemistry.

JAMES DAVID THOMPSON, A.M., M.Sc., Assistant Professor of Mathematics.

EVA EMMA HUBBARD, Instructor in Drawing.

GEORGE WASHINGTON CONLEY, A.B., Fellow in Physics.

Organization.

This College comprises the following departments:
Civil and Mining Engineering;
Mechanical Engineering and the Mechanic Arts;
Mechanics and Applied Mathematics.

Equipment and Facilities for Instruction.

The chemical, metallurgical, physical, electrical, geological and photographic laboratories are located in Science Hall, as well as the geological museum and the civil engineering laboratory, instrument-room and drawing-room. In the Mechanical Building* will be located the lecture and recitation rooms of that department, as well as the woodworking and metalworking shops, the drawing and model rooms, the mechanical, steam, hydraulic, and electrical engineering laboratories, and the electric-light and power plant of the University.

The engineering students have thus at their command a large and varied collection of apparatus and instruments, of tools and machinery, of stock and material, which is being judiciously increased from year to year. In the drawing-rooms are collections of models of bridges, furnaces, structures, mechanisms; engines, pumps, valves and valve gear; plaster casts and descriptive geometry models; sets of charts, State and Government maps, surveys, photographs, engineering specifications, drawings, tracings and blue prints.

In the workshops are bench and machine tools and workshop appliances for working wood and metal, with a selected variety of measures, gauges, small tools, stock and material.

The engineering laboratories are to be fitted with standard gauges and measures, calculating and recording instruments, with apparatus and appliances for qualitative and quantitative experimental work in civil, mechanical, steam, hydraulic and electrical engineering. The boilers, engines, pumps and condensers from the old Mechanical Building will be installed in the new building. New dynamos, motors, electrical machinery and other motive power machinery of modern type will be specially selected and arranged for experimental work in Mechanical and Electrical Engineering.

Samples of raw materials and manufactured products are collected, forming the nucleus of an engineering museum. The latest trade literature, catalogues and reports of the current commercial developments in engineering are kept in classified files for the students' reference.

The University Library has a thoroughly classified and indexed collection of the standard and latest books in engineering and the allied sciences, complete bound sets of the transactions of several scientific and engineering societies; and current issues and bound volumes of the principal scientific and technical periodicals.

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*Owing to the recent loss of the Mechanical Building by fire (March 4, 1899), temporary quarters have been provided in the basement of Science Hall, for the regular lectures and instruction in Drawing. Instruction in the engineering shops and laboratories will be resumed as soon as they can be provided for in the new Mechanical Building, about to be erected.

The regular and special courses offered by this College are designed to meet the requirements of the technical and professional lines of work leading to the respective certificates and engineering degrees indicated.

Methods of Instruction.

In the classroom instruction is given by lectures, combined with text-book study and recitations. Engineering problems and subjects are assigned to be worked out in the library or drawing-room, in the field, the shop or the laboratory. The several lines of work in any given study are co-ordinated so far as possible, as noted in schedules of this College. In this way time is economized. The student concentrates his attention, focalizing it upon the particular question, problem or project in hand. The classroom instruction is supplemented throughout by practical work in the field and drawing-room, shops and engineering laboratory. Visits of inspection to industrial establishments and power plants are made whenever it is possible to arrange for them.

The method of instruction in Manual Training and the Mechanic Arts is largely that of the shop exercise system, by which the student is familiarized with the fundamental operations of constructive mechanics. Later on such instruction is combined with the work of construction of machine elements, tools and apparatus. Attention is given to the economics of time and material by use of the shop-order system in accounting for the same.

In engineering drawing and designing the work is carried along with the study of actual typical details of structural elements, and, where possible, parallel with the construction of similar elements or exercises in the laboratories and mechanical shops. Frequent reference is made to models, to blue prints of engineering structures and to existing work in the institution or elsewhere. An opportunity is also afforded for the necessary graphical treatment of engineering problems arising in lectures and the classroom instruction of any quarter.

Lectures, mimeographed notes, collateral reading, conference work and sketching accompany all the practical lines of work.

In Experimental Engineering, the students are required to make scientific observations, keep records of tests, facilitate deductions therefrom by the use of calculating instruments, tabulate and plot results and make reports upon the test in due form. Each member of the class is required to use and to become familiar with all the instruments and apparatus of any given course. The classes are divided into groups of three or four students and furnished with mimeographed notes and forms.

Admission to the Engineering Courses.

The conditions of admission to the regular four years Engineering Courses are the same as the conditions of admission to the courses leading to the degree of Bachelor of Arts; but no student can complete either of the Engineering courses in four years unless his Preparatory course has included nine courses in English, seven courses in Mathematics, and two courses in Physics. Students who expect to take either of the Engineering courses are advised to follow in their Preparatory work one of the Engineering Preparatory Schedules given below.

Engineering Preparatory Schedule.

Two schedules have been arranged for the preparatory work:

(1) A four years schedule for those who find it necessary to take all the work in the Preparatory School, and who are not able to carry more than three studies during the first three years of the course;

(2) A three years schedule for those who have satisfactorily passed in United States History, Physiology, and Arithmetic, before entering the Preparatory School, and who are able to carry four studies throughout the three years.

I. Schedule Arranged for Four Years.

HOUR.	FALL.	WINTER.	SPRING.
		FIRST YEAR.	
8:00	English 1	English 2	English 3
9:00	Drawing 1	Drawing 2	Drawing 3, or U. S. History
11:00	French 1	French 2	French 3
		SECOND YEAR.	
9:00	Arithmetic	Physiology, or Modern History	Algebra 1
10:00	French 4	French 5	French 6
11:00	English 4	English 5	English 6
		THIRD YEAR.	
8:00	Algebra 2	Algebra 3	Plane Geometry 1
9:00	German 1	German 2	German 3
10:00	English 7	English 8	English 9
		FOURTH YEAR.	
8:00	German 4	German 5	German 6
9:00	Chemistry 1	Chemistry 2	Chemistry 3, or Plane Trigonometry
10:00	Phys. Geography	Botany 1	Botany 2, or Astronomy
11:00	Plane Geometry 2	Physics 1	Physics 2

II. Schedule Arranged for Three Years.

FIRST YEAR.

HOUR.	FALL.	WINTER.	SPRING.
8:00	English 1	English 2	English 3
9:00	Drawing 1	Drawing 2	Algebra 1
10:00	Phys. Geography	Botany 1	Botany 2
11:00	French 1	French 2	French 3
		SECOND YEAR.	
8:00	Algebra 2	Algebra 3	Plane Geometry 1
9:00	German 1	German 2	German 3
10:00	French 4	French 5	French 6
11:00	English 4	English 5	English 6
		THIRD YEAR.	
8:00	German 4	German 5	German 6
9:00	Chemistry 1	Chemistry 2	Chemistry 3, or Plane Trigonometry
10:00	English 7	English 8	English 9
11:00	Plane Geometry 2	Physics 1	Physics 2

Admission to Special Courses.

Students will be admitted to these courses upon presentation of certificates of proficiency in the necessary preparatory work or otherwise giving satisfactory evidence that they are prepared to pursue these studies advantageously. In the case of the two years certificate courses special requirements for admission are outlined below.

Admission to Advanced Courses.

Students from other institutions will be admitted to advanced standing under the same conditions under which students of this University are allowed to advance, namely:

A student to be registered as a Freshman must not be more than three courses behind his class; to be registered as a Sophomore, Junior or Senior he must have completed the required work of his course, including entrance examinations up to the beginning of the preceding year; and if a Sophomore, must not be more than three courses, or, if a Junior or a Senior, not more than two courses behind his class.

No student can be admitted as a candidate for either of the baccalaureate degrees in Engineering after the beginning of the fourth year.

The Two Years Mechanical, Electrical, and Civil Engineering Certificate Courses.

Candidates for admission to either of these courses are required to satisfy the instructors in the respective branches by examination, presentation of certificates, or otherwise, that they have had the necessary preparation to enter upon and profitably pursue the studies offered. All such preparatory work should be thoroughly done before attempting to take up the regular work of the course. The necessary preparation may be obtained at this institution or elsewhere, or through the Correspondence Courses of Instruction offered by this University, and comprises seven courses in Mathematics, two courses in Physics, six courses in English, one course in Free Hand Drawing and two courses in Chemistry.

Engineering Courses Offered in this College.

The following courses are offered:

1. A four years undergraduate course leading to the degree of Bachelor of Science in Civil Engineering;
2. A four years undergraduate course leading to the degree of Bachelor of Science in Mechanical Engineering;
3. A graduate course leading to the degree of Civil Engineer;
4. A graduate course leading to the degree of Mechanical Engineer;
5. Two groups of Manual Training courses;
6. A group of ten Mechanical-course electives for Bachelor of Arts students;
7. A group of ten Electrical-course electives for Bachelor of Arts students;
8. A two years Mechanical Certificate Course;
9. A two years Electrical Certificate course;
10. A two years Civil Engineering Certificate course.

General Description of the Engineering Courses.

Undergraduate Courses in Engineering.

These four years courses lead respectively to the degrees of Bachelor of Science in Civil Engineering and Bachelor of Science in Mechanical Engineering. They consist of forty-two full prescribed courses as detailed below under the heading "Requirements of Courses." Undergraduates in this College, however, are allowed to specialize in those branches permitting a certain amount of specialization, but they may not take less than three nor more than four courses in any one quarter.

The object of these courses is to enable young men who have pursued successfully the prescribed studies to enter upon the proper

development of the professional work with intelligence and well directed application. Fundamental training is given in the arts and sciences of engineering. Academic courses are provided containing the elements of a liberal education. These form the best preparation for future professional work and constitute the proper foundation upon which one may build successfully his professional career and reputation. Thorough technical and practical instruction follow—training a student to meet the demands and to discharge faithfully the duties of his early engineering work, enabling him to keep pace with engineering progress and to prepare to meet the obligations of responsible work later in his career.

Undergraduate Course in Civil and Mining Engineering.

This is a four years course leading to the degree of Bachelor of Science in Civil Engineering. It has been planned with a view to laying a broad and substantial foundation for the general and technical knowledge needed by practitioners in civil engineering; so that graduates, guided by their theoretical education, and the practical training they may get during the course, may find profitable employment in the line of their profession and develop into useful investigators and scientific constructors.

The work of the students is based upon an extended course on the Mechanics and Economics of Engineering. The object aimed at is to give as thorough a preparation as possible for the general purposes of the profession in the following subjects: The survey, location and construction of railroads, tramways, elevated railroads, tunnels and aqueducts; the design and construction of girder, truss and suspension bridges, of towers, roofs and arches of stone and iron; hydrographical and topographical surveys of rivers and harbors coast and geodetic surveys; the determination of latitude and longitude and the location of true meridians; the projection of maps, the construction of working drawings, plans and specifications of various engineering structures; the design and construction of machines and the determination of their efficiency; the tests and selection of the materials of engineering; the design and construction of metallurgical works; the surveys of water works, canals, levees, revetments and retaining walls; the construction of coke ovens and the design of coal and coke plants; the construction and superintendence of power and power plants; the economic theories of railroad location and construction, track work and the maintenance of way of railroads; the design and construction of hydraulic motors, and a course of instruction in mining, especially adapted to the coal and ore mining peculiar to West Virginia.

Graduate Courses in Engineering.

These lead to the professional degrees of Civil Engineer and Mechanical Engineer respectively. They consist of eight advanced engineering courses and a thesis, and require one year (three quarters) of resident study and work at the University.

Candidates for these professional degrees are required to have completed the prescribed four years course of undergraduate study in that department of this College in which they propose to take a degree, or to have completed such a course or its equivalent at some other institution of recognized standing conferring the same or an equivalent baccalaureate degree. In this case the diploma and other certificates of proficiency should be presented.

Special Engineering Courses.

These are in the field of Manual Training, the Mechanical and Electrical course electives for Bachelor of Arts students, and the two years Mechanical, Electrical and Civil Engineering Certificate courses. These lines of work afford opportunity for specializing in the undergraduate departments of the Engineering College. Students who do not propose to take a full course leading to a degree in Engineering may, nevertheless, be quite fully prepared to take up certain lines of profitable study and work during their residence at the University.

REQUIREMENTS OF COURSES.

Bachelor of Science in Civil Engineering.

The degree of Bachelor of Science in Civil Engineering will be conferred upon any student who satisfies all entrance requirements and satisfactorily completes the following forty-two college courses:

Rhetoric,	1 course;
Economics,	2 courses;
College Algebra,	1 course;
Solid Geometry,	1 course;
Analytic Geometry,	1 course;
Calculus,	2 courses;
Geology,	2 courses;
Economic Geology,	1 course;
Analytic Chemistry,	1 course;
Physics,	3 courses;
Descriptive Geometry,	2 courses;
Projection Drawing,	1 course;
Mechanical Drawing,	2 courses;
Land Surveying,	1 course;
Mechanics,	2 courses;
Strength of Materials,	1 course;

Graphic Statics,	½ course;
Stereotomy,	2 courses;
Railroad Surveying,	1 course;
Railroad Construction,	1 course;
Roads, Streets, and Pavements,	1 course;
Dynamos and Motors,	1 course;
Development and Utilization of Power,	2 courses;
Topographical and Mining Surveying,	1 course;
Mining,	½ course;
Roofs and Bridges,	1 course;
Bridge Design,	1 course;
Hydraulics,	1 course;
Detail Drawing and Design,	1 course;
Railroad Economy,	1 course;
Plans and Specifications,	½ course;
Engineering Jurisprudence,	½ course;
Civil Engineering,	1 course;
Thesis,	1 course;
Total,	42 courses.

Distribution of Work for the Degree of B. S. C. E.

FIRST YEAR.

HOUR.	FALL.	WINTER.	SPRING.
8:00			Rhetoric 1
9:00	Economics 1	Economics 2	
10:00	Solid Geometry	Algebra 4	Anal. Geom. 1
11:00	Geology 4	Geology 5	Projec. Drawing
1:30 T., Thur.	Anal. Chem. 5 (⅓)	Anal. Chem. 6 (⅓)	Anal. Chem. 7 (⅓)

SECOND YEAR.

8:00	Diff. Calculus	Int. Calculus	Mechanics 2
9:00	Land Surveying 2	Desc. Geometry 3	Desc. Geom. 4
10:00	Physics 6	Physics 7	Physics 8
11:00	Mech. Drawing (½)	Mech. Drawing (½)	Ec. Geology 6
1:30 F.	Field Practice		Field Practice

THIRD YEAR.

8:00	R. R. Surveying 5	R. R. Construction 6	Top. Survey Mine Survey
9:00	St. of Materials 3	Mechanics 3	Dyn. and Motors 17
10:00	Stereotomy 13	Stereotomy 14	Roads, S. and P. 7
1:30 F.	Field Practice		Field Practice
8:00 S.	Mech. Drawing (⅓)	Mech. Drawing (⅓)	Mech Drawing (⅓)

FOURTH YEAR.

8:00	Power 11	Power 12	Thesis.
9:00	Graph. Stat. Mining 16	Hydraulics 17	R. R. Economy 20
10:00	Roofs and Bridges 12	Bridge Design 18	Plans and Spec. 21 Eng. Jurisprudence
11:00	Civil Eng. 19	Detail Drawing and Design (½)	
1:30	Detail Drawing and Design (½)		

Suitable drawing will accompany the various theoretical courses in Surveying, Stereotomy and Bridge Design.

When Field Practice is scheduled it will be considered as forming a part of a course in Surveying which it accompanies.

When a fraction in parenthesis follows the number of a course, it indicates the credit to be given for the course. When no such fraction follows a full course credit will be given.

The above arrangement gives ten courses in the Freshman year, eleven courses in the Sophomore year, ten courses in the Junior year, and eleven courses in the Senior year, making in all forty-two courses.

The Two Years Civil and Mining Engineering Certificate Course.

This course includes:

3 courses in Mathematics;
3 courses in English;
3 courses in Chemistry;
3 courses in Physics;
and twelve courses of the student's selection from among the courses announced for the degree of B.S.C.E.

Undergraduate Course in Mechanical Engineering.

This is a four years course leading to the degree of Bachelor of Science in Mechanical Engineering. It seeks to develop the principles and to prepare for intelligent work involving the design, selection, cost, construction, installation, testing and management of power generators, prime movers, and machinery for manufacturing, transportation and power transmission; the planning, equipment, cost, construction and management of manufacturing plants, shops, factories, lighting, heating and ventilating.

Students pursuing this course may elect either the Mechanical or the Electrical alternative of the fourth year, receiving in either case the degree of Bachelor of Science in Mechanical Engineering.

This provision has been made to meet the requirements of those who may wish to specialize in either the steam engineering or the electrical engineering branches of this profession.

Bachelor of Science in Mechanical Engineering.

The degree of Bachelor of Science in Mechanical Engineering will be conferred upon any student who satisfies all entrance requirements and satisfactorily completes the following forty-two college courses:

Rhetoric,	1 course;
Economics,	2 courses;
College Algebra,	1 course;
Solid Geometry,	1 course;
Analytic Geometry,	1 course;
Calculus,	2 courses;
Geology,	2 courses;
Analytic Chemistry,	1 course;
Physics,	3 courses;
Descriptive Geometry,	1 course;
Mechanics,	2 courses;
Strength of Materials,	1 course;
Mechanic Arts,	3 ¾ courses;
Mechanism and Machinery,	2 courses;
Machine Design,	2 courses;
Mechanical Engineering Designing,	¾ course;
Drawing and Design,	1 ½ courses;
Valves and Valve Gears,	¾ course;
Steam Engine Design,	¾ course;
Steam Boilers, Heating and Ventilating,	1 course;
Dynamo Electric Machinery,	1 course;
Electrical Engineering,	1 course;
Hydraulics,	1 course;
Development and Utilization of Power,	2 courses;
Thermodynamics of Engineering,	1 course;
Prime Movers,	1 course;
Power Transmission,	1 course;
Hydraulics,	1 course;
Engineering Jurisprudence,	½ course;
Experimental Engineering,	1 course;
Thesis,	1 course;
Total,	42 courses.

Distribution of Work for the Degree of B. S. M. E.

FIRST YEAR.

HOUR.	FALL.	WINTER.	SPRING.
8:00			Rhetoric 1
9:00	Economics 1	Economics 2	
10:00	Solid Geometry	Algebra 4	Anal. Geom. 1
11:00	Geology 4	Geology 5	Desc. Geom.
1:30 T., Thur.	Anal. Chem. 5 (⅓)	Anal. Chem. 6 (⅓)	Anal. Chem. 7 (⅓)
8:00 S.	Woodworking 1 (¼)	Woodturning 2 (¼)	Pattern Making 3 (¼)

SECOND YEAR.

8:00	Diff. Calculus	Int. Calculus	Mechanics 2
10:00	Physics 6	Physics 7	Physics 8
11:00	Mechanism 34	Mechanism 35	Mach. Design 30
1:30 M., W.	Mech. Drawing 21	Mech. Drawing 22	Mech Drawing 23
1:30 F.	Forging 4 (¼)	Foundry 5 (¼)	Tin Smith & Pipe Fitting 6 (¼)
8:00 S.	Machine Work 7 (¼)	Machine Work 8 (¼)	Machine Work 9 (¼)

THIRD YEAR.

8:00	Power 11	Power 12	Machine Design 31
9:00	Str. of Materials 4	Mechanics 3	Dyn. and Motors 17
10:00	Valves and Valve	Steam Boilers 38	Thermodynamics
11:00	Gears 32	Heat. and Vent. 39	
1:30 T., Thur.	Machine Work 10 (¼)	Machine Work 11 (¼)	Machine Work 12 (¼)
1:30 F.	Mach. Drawing 24	Mach. Draw. 25	Mach. Draw. 26
8:00 S.	Exp. Mechanics 43 (⅓)	Testing Mater. 45 (⅓)	Power Meas. 44 (⅓)

FOURTH YEAR.

8:00	Prime Movers 41	M. E. Design 33 (¾)	Thesis
9:00	St. Eng. Design 36 (¾)	Hydraulics 17	Power Trans. 42
10:00	Dyn. Elec. Mach. 49	Elect. Light and Ry. Mach. 50, 51	Eng'g. Juris. (½)
1:30 M.W. Fr.	Drawing and Design 27 (½)	Drawing and Design 28 (½)	Drawing and Design 29 (½)
1:30 T., Thur.	Mech. Const. 13 (¼)	Mech. Const. 14 (¼)	Mech. Const. 15 (¼)
8:00 S.	Eng. Lab. 46	Eng. Lab. 47	Eng. Lab. 48

Fourth Year. Mechanical Alternative.

The same as the above except that candidates may upon approval of the head of the Department substitute for Mechanical Engineering courses 49, 50, and 51, two elective courses from those offered by the Department of Mechanical Engineering or the Department of Applied Mathematics.

No Engineering degree will be conferred upon any student who has not taken at least three courses in French, three courses in German, two courses in General Chemistry, and one course in Free Hand Drawing; but when such courses have been taken after the preparatory requirements have been met, the student may omit not more than three of the prescribed college courses.

Students in the Mechanical Engineering course who offer Mechanic Arts for admission will elect an equivalent amount of work in place of college Mechanic Arts.

Manual Training Courses.

The first group consists of Courses 1, 2, 3, (Mechanical Engineering), consisting of shop practice in wood and metal working. The second group consists of mechanical drawing, Courses 21, 22, 23 (Mechanical Engineering), and shop practice in wood and metal working, Courses 1, 2, 3, 4, 5, 6, 7, 8, 9 (Mechanical Engineering). These courses aim to present the simple elements of some of the constructive arts which admit of being developed into a logical series of exercises. Their merit is chiefly educational rather than as possessing any intrinsic value in relation to the several branches of handicraft work from which they are taken. The primary object is the training of the eye to see the form of objects, and of the hand to produce such forms in the materials most commonly used in constructive work. At the same time the student is acquainted with the use of the fundamental tools and with the accuracy called for in the production of the elements of construction and of simple combinations of the same in fitting parts of the work together. There is sufficient instruction in handicraft work and practice to form a proper foundation for the more advanced work with machine tools in mechanical construction, and these courses are, therefore, required of all students taking the full course in Mechanical Engineering.

Students who wish to become more proficient in the use of tools or who are preparing themselves for positions as foremen in industrial establishments, may take additional work in the shop in which they wish to specialize. Instruction will be given in the maintenance and repair of machinery, and opportunity will be afforded for the construction of new machines and apparatus for the University, as well as the working up in the shops of original designs which

have been approved by the head of the Department. All students in Mechanical Engineering are recommended to take advantage of this provision and if possible to devote a portion of the Summer Quarter exclusively to shop and drawing-room practice.

Until the completion of the new Mechanical Building not all of the work detailed above can be given, but enough to meet the immediate needs of the students will be carried on in the basements of the present buildings or in a special building provided for this purpose. The work will be supplemented by visits of inspection to local shops and industrial plants.

Suggested Groups of Engineering Electives for Bachelor of Arts Students.

These consist of ten full courses including a thesis in the applied sciences and engineering. They are preferably taken in such groups that they may have a proper sequence in the departments in which they are chosen. They have been arranged to meet the requirements of those candidates for the degree of Bachelor of Arts who prefer to take their ten major elective courses in engineering branches, and for those who look forward to becoming candidates for an engineering degree.

Students who can command the time and the resources to pursue the four years course leading to the degree of Bachelor of Arts will find it the best possible preparation for an engineering education and future professional work. After receiving the degree of Bachelor of Arts the graduate will receive one of the regular baccalaureate degrees in engineering upon completion of the remaining technical and professional courses.

The Two Years Mechanical and Electrical Certificate Courses.

These consist of twenty-four full courses, eleven of which are in general culture studies similar to those pursued by the candidates for the engineering degrees, and given by the College of Arts and Sciences; the remaining thirteen courses consist of technical studies and practical work, given by the College of Engineering and the Mechanic Arts. They meet a demand for special training in the elements of engineering science and mechanical technology by an increasing number of young men engaged as artisans, draughtsmen and engineers in the mechanical industries and trades. They will be found adapted also to the requirements of those in charge of the power plants of manufacturing and other industries and of central-station men engaged in electric light, power and railway work. A certificate of proficiency will be given the student upon satisfactory completion of the work of the several branches in either of these

two years courses. If at any time the student should return to the University to become a candidate for the degree of Bachelor of Science in Mechanical Engineering, he should first complete the entrance requirements for admission. He will then be admitted as a candidate for this degree. Following this, he will take such courses as are set forth in the regular four years course of study required for this degree, but he will be given credit for similar or accepted equivalent courses of study previously passed upon in the two years course. He will not be required to pursue any of the previous two years of work a second time, but will be admitted to such advanced standing as he may be entitled to.

Manual Training Courses.

First Group. (3-4 Course.)

Woodworking, Carpentry and Joinery,	¼ course;
Woodturning and Pattern-making,	¼ course;
Pattern-making,	¼ course.

Second Group. (3 1-2 Courses.)

Mechanical Drawing,	1 course;
Woodworking, Carpentry and Joinery,	¼ course;
Woodturning and Pattern-making,	¼ course;
Pattern-making,	¼ course;
Iron and Steel Forging,	¼ course;
Foundry Practice, Molding and Casting,	¼ course;
Tinsmithing and Pipe-fitting,	¼ course;
Machine-shop Practice, Chipping, Filing and Fitting,	1 course.

Groups of Engineering Electives Suggested for Bachelor of Arts Students.

The Electrical Group. (10 Courses.)

Mechanic Arts,	1 course;
Mechanical Drawing,	1 course;
Machine Design,	1 course;
Heat, Electricity and Magnetism,	1 course;
Theory of Dynamos and Motors,	1 course;
Dynamo-electric Machinery,	1 course;
Development and Utilization of Power,	2 courses;
Power Measurements,	⅓ course;
Electrical Measurements,	⅓ course;
Engineering Laboratory,	⅓ course;
Electric Power Plants and Transmission,	1 course;
Thesis,	1 course.

The Mechanical Group. (10 Courses.)

Mechanic Arts,	2 courses;
Mechanical Drawing,	1 course;
Machine Drawing and Designing,	1 course;
Machine Design,	1 course;
Mechanism and Machinery,	1 course;
Heat, Electricity and Magnetism,	1 course;
Development and Utilization of Power,	1 course;
Experimental Engineering,	1 course;
Thesis,	1 course.

The Two Years Mechanical Course.

A Certificate of Proficiency will be given to any student who satisfies the prescribed entrance requirements and satisfactorily completes the following twenty-two college courses:

Mathematics,	5 courses;
Economics,	2 courses;
Analytical Chemistry,	1 course;
Physics,	3 courses;
Geology,	2 courses;
Mechanics,	1 course;
Mechanism and Machinery,	2 courses;
Descriptive Geometry,	1 course;
Mechanical Drawing,	¾ course;
Machine Design,	1 course;
Mechanic Arts,	2¼ course;
Experimental Engineering,	1 course;
Total,	22 courses.

The Two Years Electrical Certificate Course.

A Certificate of Proficiency will be given to any student who satisfies the prescribed entrance requirements and satisfactorily completes the following twenty-two and one-fourth college courses:

Mathematics,	5 courses;
Economics,	2 courses;
Analytical Chemistry,	1 course;
Physics,	3 courses;
Geology,	2 courses;
Mechanics,	1 course;
Mechanism and Machinery,	1½ courses;
Machine Design,	¾ course;
Descriptive Geometry,	1 course;
Mechanical Drawing,	¾ course;

Mechanic Arts,	2¼ courses;
Experimental Engineering,	1 course;
Electrical Laboratory (special Physics),	1 course.
Total,	22¼ courses.

Distribution of Work for Mechanical Certificate.

FIRST YEAR.

HOUR.		FALL.	WINTER.	SPRING.
9:00		Economics 1	Economics 2	
10:00		Solid Geometry	Algebra 4	Anal. Geom. 1
11:00		Geology 4	Geology 5	Desc. Geom.
1:30	T.-Th.	Anal. Chem. 5 (⅓)	Anal. Chem. 6 (⅓)	Anal. Chem. 7 (⅓)
1:30	M.-W.	Mech. Drawing 21 (¼)	Mech. Drawing 22 (¼)	Mech. Drawing 23 (¼)
1:30	F.	Forging 4 (¼)	Foundry 5 (¼)	Tin Smith. & Pipe Fitting 6 (¼)
8:00	S.	Woodworking 1 (¼)	Woodturning 2 (¼)	Patternmaking 3 (¼)

SECOND YEAR.

8:00		Diff. Calculus	Int. Calculus	Mechanics 2
10:00		Physics 6	Physics 7	Physics 8
11:00		Mechanism 34	Mechanism 35	Mach. Design 30
1:30	M.-W.	Mech. Drawing 21	Mech. Drawing 22	Mech. Drawing 23
1:30	F.	Machine Shop 10 (¼)	Machine Shop 11 (¼)	Machine Shop 12 (¼)
8:00	S.	Expr. Mechanics 43 (⅓)	Testing Mater. 45 (⅓)	Power Meas. 44 (⅓)

Distribution of Work for Electrical Certificate.

FIRST YEAR.

Same as for Mechanical Certificate Course.

SECOND YEAR.

8:00		Diff. Calculus	Int. Calculus	Mechanics 2
10:00		Physics 6	Physics 7	Physics 8
11:00		Mechanism 34	Mechanism 35	Mach. Design 30
1:30	M.-W.	Elect. Lab. (⅓)	Elect. Lab. (⅓)	Elect. Lab. (⅓)
1:30	F.	Machine Shop 10 (¼)	Machine Shop 11 (¼)	Machine Shop 12 (¼)
8:00	S.	Expr. Mechanics 43 (⅓)	Testing Mater. 45 (⅓)	Power Meas. 44 (⅓)

Graduate Course for the Degree of Mechanical Engineer.

This comprises advanced work in Mathematical Physics with particular reference to the sciences of Thermodynamics, Hydrodynamics, Electricity and Magnetism, and to their respective applications in engineering development, design and construction. Designs of steam, hydraulic and electrical machinery, as well as of power and manufacturing plants, will be submitted, with complete sets of drawings and blue prints, specifications, bills of material and estimates for some one completed project in these fields. A review will be made of industrial, manufacturing and power-plant systems, and a report submitted, with special attention given to the economic features of such engineering projects.

Graduate Course for the Degree of Civil Engineer.

This course will comprise eight full courses of advanced civil engineering studies and work, and a graduating thesis. These courses may be selected from the advanced and the graduate courses offered by the department of Civil Engineering. Similar graduate courses offered by the other departments of this College may be selected to accompany the Civil Engineering graduate courses if, after conference, they shall be accepted as satisfactory to the head of this department.

Theses.

Each candidate for a baccalaureate or a graduate degree in Engineering will be required to prepare a thesis on some subject relating to a special branch of engineering or other department of applied science. The thesis must be either a design or a review of some machine, structure or process belonging to some department of scientific investigation. It must be fully elaborated and accompanied by the necessary working drawings or models required for the proper elucidation of the subject of the thesis.

With its accompanying drawings it will be presented first to the professor under whose guidance it has been prepared. It must be accepted by the head of that department in which the degree is to be conferred. A typewritten copy of the thesis, prepared according to the official specifications for theses, must be placed in the University Library before graduation.

Special Students.

Deserving young men who have not the time or are otherwise unable to take the full course will be allowed to take a special or partial course, consisting of such studies as they are prepared to

take up, provided that such partial course shall have been submitted to the Faculty and approved by them.

Young men under twenty-one years of age desiring to take special courses in the College of Engineering and the Mechanic Arts are required to present the same qualifications as candidates for one of the regular courses in this College. Young men twenty-one years of age or over who are not candidates for an Engineering degree, but who wish to pursue special studies along engineering lines, will be permitted to do so upon giving satisfactory evidence that they are prepared to take the desired studies advantageously; but if they subsequently desire to become candidates for a degree or to take a regular course in engineering they must pass the required entrance examinations for that year.

Engineering Society.

The Engineering Society is organized in connection with the Engineering departments. It is conducted by the students of these departments, and meets once a week. Its object is the investigation and discussion of scientific subjects. All engineering students are requested to join this organization and perform such work as its rules require. Students taking either of the four years courses leading to the baccalaureate degrees in Engineering are expected to engage actively for three years in the work of the Society.

Engineering students are further recommended to select suitable groups of the synoptic lectures offered by the University and given weekly throughout the year.

DEPARTMENTS OF INSTRUCTION.

Each of the following courses of instruction is known as a full course unless otherwise stated; that is, a course of five class exercises a week for one quarter, or their equivalent in laboratory or other practical work. When no instructor's name is appended to a course, such course will be given by the head of the department.

The following branches of applied science and engineering are represented in the courses offered by the Engineering departments:

Applied Mathematics;
Civil Engineering;
Designing;
Drawing;
Electrical Engineering;
Experimental Engineering;
Hydraulic Engineering;
Mechanics;
Mechanic Arts;
Mechanical Engineering;
Metallurgy;
Mining Engineering;
Municipal Engineering;
Railroad Engineering;
Sanitary Engineering;
Steam Engineering;
Structural Engineering;
Surveying.

Civil and Mining Engineering.

Professor John L. Johnston and Assistant Professor Morris.

Courses for Undergraduates.

1. **Projection Drawing.** Orthographic projections in one quadrant; elementary problems in shades and shadows; isometric and oblique projections. Lectures and recitations. Drawing-room work. Warren's "Industrial Drawing," part III, and Faunce's "Descriptive Geometry." Required of Civil Engineering Freshmen.
Assistant Professor Morris. 14 S.

2. **Land Surveying.** Theory and practice of land surveying; magnetic variations; calculating the content; retracing old lines; division of lands; establishment of meridians; care and use of instruments; mapping the survey; field practice. Lectures and recitations. Gillespie's "Surveying." Required of Civil Engineering Sophomores. Assistant Professor Morris. 14 S.

3. **Descriptive Geometry.** Orthographic projections in the four quadrants; problems of the point, line and plane; tangencies and

the development of single-curved surfaces. Warren's text-books. Required of Civil Engineering Sophomores.

Assistant Professor Morris. 14 S.

4. **Descriptive Geometry.** Single-curved, double-curved and warped surfaces; intersections, tangencies and developments; shades, shadows and perspective. Lectures and recitations. Warren's text-books. Required of Civil Engineering Sophomores.

Assistant Professor Morris. 14 S.

5. **Railroad Surveying.** Theory and practice of railroad surveying. Lectures, recitations and field work. Searles. Required of Civil Engineering Juniors.

Assistant Professor Morris. Fall, 8:00; 14 S.

6. **Railroad Construction and Maintenance.** Tunnels, trestles, track work, earth work, signalling, graduation, masonry, etc. Tratman's "Track and Trackwork." Required of Civil Engineering Juniors. Assistant Professor Morris. Winter, 8:00; 14 S.

7. **Roads and Pavements.** Location, construction and maintenance; study and comparison of the various types of roads; road-making material. Lectures. Required of Civil Engineering Juniors.

Assistant Professor Morris. 14 S.

8. **Graphic Statics.** Graphic method of determining stresses, moments and shears in roof and bridge trusses. Merriman's "Roofs and Bridges," part II. Required of Civil Engineering Juniors.

Half course. Assistant Professor Morris. 10:00; 14 S.

9. **Mine Surveying.** Theory and practice of underground surveying. Lectures and recitations. Required of Civil Engineering Juniors. Half course. Assistant Professor Morris. 14 S.

10. **Topographical Surveying.** Theory and practice of topographic, hydrographic and barometric surveying, city surveying, etc. Lectures and recitations. Gillespie's "Higher Surveying." Required of Civil Engineering Juniors.

Half course. Assistant Professor Morris. 14 S.

11. **Mechanical Drawing.** Engineering drawing, detail shop drawings, etc. Laboratory. Thorne's "Senior Course in Mechanical Drawing." Required of Civil Engineering Juniors.

Assistant Professor Morris. 14 S.

12. **Roof and Bridge Design.** Determinations of stresses, shears and bending moments, in various types of roof and bridge trusses by analytic methods. Lectures and recitations. Merriman's "Roofs and Bridges," parts I and III. Required of Civil Engineering Seniors. Professor Johnston. Fall, 9:00; 14 S.

13. **Stereotomy.** Stone-cutting, plain and decorative. Recitation and laboratory. Warren's "Stone Cutting." Required of Civil Engineering Seniors. Prerequisites, Courses 3, 4, 8.

Professor Johnston. 14 S.

14. **Stereotomy.** Stone-cutting; pattern-making; cutting stones in clay. Laboratory. Warren's "Stone Cutting." Required of Civil Engineering Seniors. Prerequisites, Courses 3, 4, 8, and 13.

Professor Johnston. 14 S.

15. **Mechanical Drawing.** Detail drawing, shop drawing, etc. Thorne's Junior and Intermediate Drawing. Required of Civil Engineering Sophomores. Assistant Professor Morris. 14 S.

16. **Mining Engineering.** Coal and ore mining peculiar to the bituminous coal regions; the inception, construction and operation of mining plants; the gases of coal mines and their treatment. Lectures and recitations. Required of Civil Engineering Seniors.

Professor Johnston. Half course. 14 S.

17. **Hydraulics.** Theoretic pressure and energy of water; flow of water through orifices; tubes and weirs; flow in conduits, pipes, canals, brooks, and rivers; current meters, water motors, water wheels, and naval hydromechanics. Lectures and recitations. Merriman's "Hydraulics." Required of Civil and Mechanical Engineering Seniors. Professor Johnston. 14 S.

18. **Bridge Design.** Complete designs of the plate girder and the Pratt truss. Recitations, lectures and laboratory. Merriman's "Roofs and Bridges," parts III and IV. Required of Civil Engineering Seniors. Professor Johnston. 14 S.

19. **General Engineering Construction.** Materials of engineering; foundations; retaining walls; masonry and pile construction, etc. Lectures and recitations. Required of Civil Engineering Seniors. Professor Johnston. 14 S.

20. **Railroad Economy.** General theory of railroad location and construction, from the inception of the project to the completion; effects of grades, curvature and distance on operating expenses and revenue; railroad finance and management. Lectures. Required of Civil Engineering Seniors. Professor Johnston. 14 S.

21. **Plans and Specifications.** General forms for plans and specifications; local, customary and legal aspects. Lectures. Required of Civil Engineering Seniors.

Professor Johnston. Half course. 14 S.

22. **Mechanical Drawing.** Detail drawing and design, construction details in wood, stone and steel. Professor Johnston. 14 S.

23. **Thesis.** Required of Civil Engineering Seniors.

Courses for Graduates.

Hours to be Arranged.

24. **Bridge Design.** Double trusses; arched upper chords.

25. **Bridge Design.** Suspension, cantilever and swing bridges.

26. **Sanitary Engineering.** Sewers and drains; house drainage; sewage disposal.

27. **Heating and Ventilation of Buildings.**

28. **Masonry.** Dams, foundations, arches, piers, and abutments.

29. **Engineering Drawing and Design.**

30. **Building Superintendence.** Detail study of construction and methods. Half course.

31. **Steel Framed Structures.** Elevated roads, water towers, high buildings, inclines.

32. **Thesis.** One course. Required of candidates for the degree of C.E.

Mechanical Engineering and the Mechanic Arts.

Assistant Professor Jones and Mr. West.

Courses for Undergraduates.

1. **Woodworking.** Instruction is given in carpentry, joinery and other bench work; exercises with the fundamental edge tools in soft and hard woods, and in matching, molding, joining and making typical framed work.

One-fourth course. Fall, Saturday, 8 to 12.

2. **Woodturning.** Comprises the fundamental geometric forms in soft and hard woods; fitting forms of reversed curves; face plate work, chucking, boring, finishing and polishing, and elements of pattern-making. One-fourth course. Winter, Saturday, 8 to 12.

3. **Pattern-Making.** Applies the foregoing instruction in its relation to patterns for machine construction, considers the types of patterns and usual allowances for draft, shrinkage and finish, with exercises in making patterns of machine elements and other work to be executed later in the machine shop.

One-fourth course. Spring, Saturday, 8 to 12.

4. **Forging.** Exercises in drawing out and sizing, forming, welding, jointing and fitting iron; steel forging, tempering, annealing; making typical tools to be used later in the machine shop; manner of working forges; determining quality of iron and steel and strength of the students' welded joints.

One-fourth course. Fall, Friday, 1:30 to 5:30;
Spring, Saturday, 8 to 12.

5. **Foundry.** Molding and casting in connection with pattern-making; selection, preparation and use of molding, facing and parting sands; use of typical molders' tools and appliances; making castings from exercise patterns and from those for machine work.

One-fourth course. Winter, Friday, 1:30 to 5:30.

6. **Tinsmithing and Pipe-Fitting.** Brazing, tinning, forging and use of coppers; seamless and solder-jointed work in tin and sheet-iron; laying out; cutting and forming sheet-metal; solder joints for electrical fitting; bending and coiling pipe; making joints and

use of packing; drilling and tapping for pipe and bolt holes in boiler plate; soft and hard patches; tank and boiler riveting; caulking and tube expanding.

One-fourth course. Spring, Friday, 1:30 to 5:30.

7, 8, 9. **Machine Work.** Iron work at the bench, chipping, filing, fitting, scraping, polishing; key-seating; formation of straight-edges, surface-plate, guages, and machinists' small tools. Handwork with machine tools, drilling, tapping; machine tool work with the drill-press, lathe, shaper. Three-fourths course.

Fall, Winter, Spring, Tuesday, Thursday, 1:30.

10, 11, 12. **Machine Tool Work.** A continuation of Courses 7, 8, 9, Mechanical Engineering; advanced machine tool work with drill-press, lathe, shaper, planer, emery grinder, and milling machine; production of finished machine elements and interchangeable parts; reproduction of typical details of machine tools and other workshop appliances. Three-fourths course.

Fall, Winter, Spring, Tuesday, Thursday, 1:30, and Saturday, 8:00 to 12:00.

13, 14, 15. **Mechanical Construction.** Reproduction of typical details of steam-engine and other motive-power machinery; work from original designs; manufacture of special apparatus for shop and laboratory use; practice in building, assembling and erecting workshop and engineering appliances, motive-power machinery and accessories, and in attendance on the same. Three-fourths course.

Fall, Winter, Spring, Tuesday, Thursday, 1:30.

16. **Electrical Construction.** Mechanical repairs to dynamos and motors, babbitting and boring out bearings, fitting brushes, truing commutators; winding field coils; making switches and rheostats. One-third course. Fall, Tuesday, Thursday, 1:30.

21, 22, 23. **Mechanical Drawing.** Isometric, cabinet and orthographic projections and simple working drawings; details of mechanical movements and drawings of machine parts worked out in Courses 34, 35 and 30, Mechanical Engineering, respectively. Time to be assigned from the theoretical courses which they accompany. Three-fourths course.

Fall, Winter and Spring, Monday, Wednesday, 1:30; Summer, Tuesday, Thursday, 1:30 to 5:30, Saturday, 8 to 12.

24, 25, 26. **Machine Drawing.** Drawing-room practice accompanying and forming a part of Courses 32, 38 and 31, Mechanical Engineering, respectively; conventional methods, detail and assembled drawings, tracing and blue printing, chiefly of valve gears and machine parts worked out in the theoretical courses which they accompany.

Three-fourths course. Fall, Winter, Spring, Friday, 1:30 to 5:30; Summer, Tuesday, Thursday, 1:30 to 5:30, Saturday, 8 to 12.

27. **Drawing and Designing.** Drawing-room practice accompanying Courses 36 and 41, Mechanical Engineering; as far as possible complete drawings of engines are made from calculations and designs developed in Course 36. Students taking the electrical alternatives are allowed to specialize. Prerequisite, Course 32, Mechanical Engineering.

One-half course. Fall, Monday, Wednesday, Friday, 1:30.

28. **Drawing and Designing.** Continuation of Course 27 and drawing-room and office work accompanying Course 33, Mechanical Engineering. References made chiefly to blue prints and mechanical drawings of actual power and manufacturing plants.

One-half course. Winter, Monday, Wednesday, Friday, 1:30.

29. **Drawing and Designing.** Continuation of Course 28 and specialized engineering drawing. Prerequisite, Course 28, Mechanical Engineering.

One-half course. Spring, Monday, Wednesday, Friday, 1:30.

30. **Machine Design.** Elements in machine design, conventional and rational; adaptation of commercial sizes; proportioning fastenings, flanges, bearings, rotating pieces, connecting links and machine supports. Supplemented by Course 23, Mechanical Engineering. Lectures, recitations and drawings. Smith's "Machine Design," F. R. Jones' "Machine Design," part II. Spring, 11:00; Summer, 8:00.

31. **Machine Design.** Continuation of Course 30 but involving a knowledge of strength of materials; mechanics and machinery; influence of material and treatment on design. Lectures, recitations and drawing, Course 27. Unwin's "Machine Design." Spring, 8:00.

32. **Valves and Valve Gears.** Comparison of valve diagrams; analysis and design of valves and valve gears. Prerequisite, Course 31, Mechanical Engineering. Lectures, recitations and drawing, Course 24. Fall, 10:00.

33. **Mechanical Engineering Design.** Embodies the details of the earlier courses of instruction in Prime Movers and motive-power machinery in respect to the design of steam and electric power and hydraulic plants for power transmission and manufacturing purposes; location of the plant; selection, arrangement, subdivision into units and installation; economics, organization and management of power and manufacturing plants; engineering specifications. Lectures and accompanying Course 28, Mechanical Engineering.

Three-fourths course. Winter, 8:00.

34. **Mechanism and Machinery.** Analysis and classification of mechanism, diagrams and relative velocities of machine parts; principles of transmission and change motions by linkages, rolling contact, toothed gearing, couplings, belt gearings, cams, parallel and

straight-line motions; analysis of motions in simple machines. Supplemented by practical applications, Course 21, Mechanical Engineering. Lectures and recitations. F. R. Jones' "Machine Design," part I, technical journals and trade catalogues.

Spring, 11:00; Summer, 9:00.

35. **Mechanism and Machinery.** Continuation of Course 34, Mechanical Engineering; classification and analysis of machinery with special attention to work-shop appliances, machine tools and machinery of transmission. Prerequisite, Course 34, Mechanical Engineering. Lectures, recitation and drawing, Course 22.

Winter, 11:00.

36. **Steam Engine Design.** Comparison of rational and empirical formulae; complete design of simple engine. Supplemented by Course 27, Mechanical Engineering. Lectures and recitations. Fall, 9:00.

37. **Thermodynamics of Engineering.** Mechanical theory of heat; thermodynamics of gases and vapors, with special application to steam and other heat engines, air and refrigeration. Prerequisites, Courses 11 and 12, Mechanics. Lectures and recitations. Peabody's "Thermodynamics of the Steam Engine." Spring, 8:00.

38. **Steam Boilers.** Heating value of fuels, combustion, economical production of steam; application of theory and practice in the design of steam boilers, chimneys and accessories; steam piping and distribution. Prerequisite, Course 30, Mechanical Engineering. Lectures, recitations and drawing, Course 25, Mechanical Engineering. Peabody & Miller's "Steam Boilers."

Half course. First six weeks, Winter, 10:00

39 **Heating and Ventilating.** Principles, comparative merits and design of the various systems of ventilating, heating by hot air, hot water, steam and electricity. A careful study of the systems in the different University buildings. Prerequisite, Course 4, Physics. Lectures and recitations. Carpenter's "Heating and Ventilating Buildings." Half course. First six weeks, Winter, 10:00.

40. **Heating and Ventilating.** Special course for prospective heating and ventilating engineers. Open to those completing Course 39, Mechanical Engineering. Lectures and laboratory work. Time to suit convenience of students.

41. **Prime Movers.** Expansive working of steam, principles of design, construction and operation of steam engines, pumping engines, motive-power machinery, turbines, hydraulic motors and machinery. Prerequisite, Courses 31 and 37, Mechanical Engineering. Lectures, recitations and laboratory, Course 46, Mechanical Engineering. Fall, 8:00.

42. **Power Transmission.** Generation, transmission, distribution of electric power; comparison with other systems; economics

of location, selection, arrangement, subdivision into units and installation of steam and electric power. Bell's "Electric Power Transmission." Lectures and accompanying Course 48, Mechanical Engineering. Spring, 9:00; Summer, 8:00.

43. **Experimental Mechanics.** The comparison of experimental results and determination of physical laws from observation; theory, calibration and use of slide rule and instruments for the measurement of length, area, volume, weight, power, speed, and pressure; experimental work in kinematics, statics, dynamics, mechanisms and machinery. Prerequisite, or accompanying Course 2, Mechanics. Carpenter's "Experimental Engineering."

One-third course. Fall, Saturday, 8 to 12.

44. **Power Measurements.** Efficiency tests of simple engines, pumps, dynamos, motors and machinery of power transmission; measurements of power by Prony brake, rope brake, Alden absorption dynamometer, transmitting dynamometer; steam-engine indicator practice and simple valve setting; determination of the quality of steam. Prerequisite or accompanying Course 12, Mechanics.

One-third course. Spring, Saturday, 8 to 12.

45. **Testing Materials of Engineering.** Tensile, compressive and transverse tests of wrought iron, cast iron, steel and timber; transverse, compressive and absorption tests of stone and brick; tensile, compressive, specific gravity and absorption tests of cement; also tests for fineness, time of setting and constancy of volume; testing lubricating value of oils, including composition, viscosity, specific gravity, flash and burning tests, cold test and coefficient of friction. Prerequisite or accompanying Course 4, Mechanics.

One-third course. Winter, Saturday, 8 to 12.

46. **Mechanical Engineering Laboratory.** Experimental work in thermodynamics, tests of thermometers, indicators, injectors, calorimeters, steam and oil separators, non-conducting coverings, flow and quality of steam, coal calorimetry, analysis of chimney gases; practice in valve setting, behavior of steam in the cylinder; or such other work as may be assigned. To form a part of and time to be assigned from Course 41, Mechanical Engineering. Fall.

47. **Mechanical Engineering Laboratory.** Economy tests of simple and multiple expansion working of the steam engines, condensing and non-condensing; steam boilers, fired with gas and coal; steam heating apparatus; duty trials of steam pumps; efficiency tests of hydraulic motors, fans, blowers, etc.; application of Hirn's analysis to the steam engine; flow of water through pipes and orifices, calibration of water meters.

48. **Mechanical Engineering Laboratory.** Combined tests of performances of boilers, engines and electrical and other power transmission machinery; testing of plants away from the University

when opportunity affords; special research work. To form a part of and time to be assigned from Course 42, Mechanical Engineering.

49. **Dynamo-Electric Machinery.** Principles of design, construction and operation of dynamos, motors and transformers. Prerequisite, Course 9, Physics, and to accompany Course 52, Mechanical Engineering. Jackson's "Electro-Magnetism and the Construction of Dynamos," and "Alternating Currents and Alternating Current Machinery." Summer, Fall, 10:00.

50. **Electric Lighting.** Principles of design, construction, installation and operation of electric-lighting systems; electrical distribution for lighting circuits; manufacture, care and use of arc and incandescent lamps. Prerequisite, Course 9, Physics, and to accompany Course 53, Mechanical Engineering. Crocker's "Electric Lighting." Half course. First six weeks, Winter, 10:00.

51. **Electric Railroads.** Principles of design, construction, installation, operation and management of electric railway machinery and electric railroad systems, and distribution for railway circuits. Prerequisite, Course 9, Physics, and to accompany Course 53, Mechanical Engineering. Bell's "Power Distribution for Electric Railroads." Half course. Second six weeks, Winter, 10:00.

52, 53. **Electrical Engineering Laboratory.** Practical management of electrical machinery; coupling generators; calibration of electrical engineering measuring instruments; switch-board tests; determination of efficiencies and characteristics in laboratory and commercial tests of dynamos and motors; comparison methods; investigation of losses; location of faults; testing arc and incandescent lighting circuits. Prerequisites, Course 9, Physics, and Course 44, Mechanical Engineering. To accompany Courses 49, 50 and 51, Mechanical Engineering. Time to be assigned from same. Parham & Shedd's "Shop and Road Testing of Dynamos and Motors." Fall, Winter.

54. **Thesis.** Required of candidates for the degree of Bachelor of Science in Mechanical Engineering. Conference work. Spring, 8:00.

Courses for Graduates.

Hours to be Arranged.

55. **Steam Engineering.** Prerequisites, Courses 37, 38, 41, Mechanical Engineering. Fall.

56. **Electrical Engineering.** Prerequisites, Course 9, Physics, and Course 49, Mechanical Engineering. Winter.

57. **Mechanical Engineering Design.** Prerequisite, Course 33, and to accompany Course 55, Mechanical Engineering. Fall.

58. **Mechanical Engineering Design.** Prerequisite, Course 33 and accompanying Course 56, Mechanical Engineering. Winter.

59. Mechanical Engineering Laboratory. Prerequisites, Courses 46, 47, 48, and to accompany Course 55, Mechanical Engineering. Fall.

60. Mechanical and Electrical Engineering Laboratory. Prerequisite, Course 59, and to accompany Course 56, Mechanical Engineering. Winter.

61. Mechanical Engineering Practice. Lectures. Spring.

62. Mechanical Engineering Review and Reports. Lectures and field work. Spring.

63. Machinery and Mill Work. Prerequisite, Course 31, Mechanical Engineering. Elective for Seniors. Fall.

64. Marine Machinery. Prerequisite, Course 41, Mechanical Engineering. Elective for Seniors. Winter.

65. Materials of Engineering. A study of the various materials used in engineering, the source, manufacture, qualities, costs, etc. Hour to be arranged. Prerequisite, Mechanics 4.

66. Thesis. Required of all candidates for the degree of Mechanical Engineer.

Mechanics and Applied Mathematics.

Professor Emory.

1. Elementary Mechanics. The principles of rational mechanics with little use of the calculus, and from the physical standpoint. For students pursuing the two-year certificate Mechanical or Electrical course, and those preparing for the work of the artisan, foreman or draughtsman. Prerequisite, Trigonometry.

Winter, 11:00; 2 M.

2. Kinematics and Dynamics. The mathematical study of motion and rest, including translation, rotation, vectors, uniform and variable velocities and accelerations, and the geometrical study of the motion of a material point. Dynamics, study of mass, density, moments and centers of mass, and the determination of centers of gravity, momentum, force, and energy. Required of Civil and Mechanical Engineering Juniors. Prerequisite, Calculus.

Spring or Fall, 9:00; 2 M.

3. Statics and Kinetics. Concurrent forces, stability of chimneys, towers, earth work, jointed frames, graphical methods and method of sections for determining stresses in structures, friction and constraints, principle of virtual work, theory of attraction and potential, kinetic and potential energy, momentum, impact, work, power, center of gyration, moments of inertia, kinetics of masses and problems in practical selective design. Required of all Civil and Mechanical Engineering Juniors. Prerequisite, Course 2.

Fall or Winter, 9:00; 2 M.

4. **Applied Mechanics.** Strength of Materials. Resistance and elasticity of materials, pipes, cylinders, and riveted joint, cantilever and simple beams, tension and compression, resilience, shear and torsion, strength of timbers, iron, steel, stone, cement, elastic limit, factors of safety. Design of simple structures. Required of all Civil and Mechanical Engineering Juniors. Prerequisite, Course 3.
Spring or Winter, 9:00; 2 M.

5. **Mechanics of Engineering.** An advanced course in the mechanics of engineering and of engineering materials, with designs of structures, machines and apparatus, involving their use and selection. For Seniors having preparation, and for graduate students.

6. **Consulting Engineering.** The study of engineering problems, ensemble and in detail, with estimates for installation and economical management. For graduates and Seniors with suitable preparation.

7. **Materials of Construction.** Strength and elasticity; safe loads; changes under different conditions, etc.

8. **Industrial Plants.** The economic study of industrial plants from the engineer's standpoint. Installation and management. For graduates. Half course.

9. **Applied Mathematics.** This course accompanies the Sophomore work in Pure Mathematics in the Engineering course, and is intended to furnish the applications of Mathematics as a basis for the future engineering studies, and particularly as an introduction to the study of theoretical and applied Mechanics, being the mathematical study of motion, and solution of differential equations as occurring in the theoretical Mechanics. Required of Civil Engineering Sophomores. Prerequisite, Analytical Geometry.
Spring, 11:00; 2 M.

10. **Method of Least Squares.** Errors of observation; principle of probability; weight of observations; principle of least squares; probable errors of observations. Optional for Seniors and graduates. Prerequisite, Calculus. Half course. 2 M.

11. **Development and Utilization of Power.** Lecture course. History and development of the pumping engine, railroad engine, naval, steam, hot air, gas, oil, wind, and hydraulic engines for all classes of work; modern generator. Open to all students. Required of Civil Engineering Seniors and Mechanical Engineering Juniors, and optional for graduates. Fall, 8:00; 2 M.

12. **Development and Utilization of Power.** Text-book course. Mathematical study of the development of power, the Clausius, Rankine and physical methods of the development of power, measurement of power, testing of apparatus and generators, power-plant installation, and selective design. Complete calculations for power

plant to perform some special work, such as water supply, coal handling, mine operation, etc. Prerequisites, Course 3 and Calculus. Required of all Senior Civil and Mining Engineers, and of all Junior Mechanical and Electrical Engineers, and optional for graduates.

Winter, 8:00; 2 M.

13. **Development and Utilization of Power.** Advanced consulting course in power with economical study from the standpoint of the engineer, owner and contractor. Optional for graduates.

Half course. 2 M.

14. **Engineering Calculus.** The application of the simple rules of the Calculus to engineering formulæ and processes of the Mechanics. Special course for and required of Sophomores in the two years certificate Mechanical and Electrical course. Prerequisite, Analytical Geometry. Half course. 2 M.

15. **Mathematical Theory of Heat.** Optional course for Seniors having preparation and for graduates. Prerequisite, Calculus.

Half course. 2 M.

16. **Mathematical Theory of Electricity.** Mathematical theory of the direct and alternating curent, condensers, transformers, motors, etc. Optional for Seniors and graduates. Prerequisite, Calculus. Half course. 2 M.

17. **Hydraulic Motors.** Mathematical study of hydraulic motors. Optional for Seniors and graduates. Prerequisite, Analytical Geometry. Half course. 2. M.

18. **Applied Mathematics.** An advanced course in the applications of the Calculus to Engineering problems, introductory to differential equations. Half course. 2 M.

19. **Differential Equations.** A more extended course than Course 9, above, consisting of the solution of differential equations in general, including the special applications to Mechanics and the discussion of the differential equation in general. Prerequisite, Pure Mathematics, Course 9; or may be taken during the same quarter with Course 9. Half or full course. Time to be arranged. 2 M.

20. **Higher Mathematics.** A course in general Higher Mathematics, including vector analysis, and hyperbolic functions, etc. Prerequisite, Differential Equations, Courses 19, above.

Half or full course. Time to be aranged. 2 M.

THE COLLEGE OF AGRICULTURE.

The Faculty.

JEROME HALL RAYMOND, Ph.D., President of the University, and Professor of Economics and Sociology.

THOMAS CLARK ATKESON, Ph.D., Dean, and Professor of Agriculture.

LEE CLEVELAND CORBETT, M.S., Professor of Horticulture and Forestry.

ANDREW DELMAR HOPKINS, Ph.D., Professor of Economic Entomology.

BERT HOLMES HITE, M.S., Professor of Agricultural Chemistry.

FREDERICK PHILIP RUHL, D.V.S., Professor of Veterinary Science.

WILLIAM EARL RUMSEY, B.S.Agr., Instructor in Botany.

THOMAS ZEPHANIAH ATKESON, B.S.Agr., Fellow in Agriculture.

The College of Agriculture.

The well-equipped Scientific departments of the University, together with their laboratories and scientific apparatus, and the libraries of the Agricultural Experiment Station and University, are at the command of the students in the College of Agriculture. The farm of the Agricultural Experiment Station, together wih its gardens, experimental plats, laboratories and collections, will be available for students desiring to acquaint themselves with the practical and scientific methods of conducting agricultural pursuits and to investigate scientific questions relating to the progress and development of agriculture.

The farm is equipped with barns, stables and other buildings, and presents a variety of soils and conditions existing upon many of the farms of the state. Upon this farm are kept different varieties of farm animals and the most approved agricultural implements; and facilities are provided for studying the most economic methods of handling live stock and their products, including poultry.

The students who complete the course in this College are expected to be thoroughly up to date and enthusiastic followers of their chosen profession, as well as broadly educated citizens.

Expenses.

To West Virginia students, tuition is free.

To students from other states, tuition is $12.50 per quarter (twelve weeks).

The matriculation fee, payable by all students upon entering the University, is $5. Unless a student remains out of the University more than three years the matriculation fee is paid but once by each student.

The contingent fee, payable by all students, is $2 per quarter.

Board and room may be obtained in Morgantown at from $3 to $4 per week.

Courses of Study.

The College of Agriculture offers the following courses:

1. The regular four years course, leading to the degree of Bachelor of Science in Agriculture (B.S.Agr.).
2. The two years course, leading to the degree of Bachelor of Agriculture (B.Agr.).
3. The one year course, which does not lead to any degree, but for the completion of which a certificate is given.
4. A special twelve weeks course, so arranged that students may complete the one-year course in three winter quarters.
5. A special twelve weeks' course in Veterinary Science, Stock Breeding and Feeding will be given during the winter quarter.
6. The Agricultural Home Reading Course, for those who can not attend the University in person, but desire University guidance in carrying on a course of Agricultural study at home.

Conditions of Admission.

Candidates for admission must present certificates of good moral character, and if from other colleges or universities must bring letters of honorable dismissal.

Entrance Subjects and Requirements.

For meeting the requirements for admission to the Freshman Class candidates are offered a choice of seventy-seven courses in thirty-seven subjects. A "course" represents the amount of work done by a class meeting five times a week for one quarter (twelve weeks). The entrance subjects are all reduced to the unit of a course, and placed on exact equality. Thirty-nine courses will be accepted for admission in full standing, and these may be selected by the candidate from among the following seventy-seven courses:

1.	English Grammar,	2 courses;
2.	English Composition and Rhetoric,	5 courses;
3.	English Literature,	2 courses;
4.	Latin,	9 courses;
5.	Greek, -	6 courses;
6.	French,	6 courses;
7.	German,	9 courses;
8.	Greek History,	1 course;
9.	Roman History,	1 course;
10.	Mediæval History,	1 course;
11.	Modern History,	1 course;
12.	English History,	1 course;
13.	American History,	1 course;
14.	Civil Government,	1 course;
15.	Arithmetic,	1 course;
16.	Elementary Algebra,	3 courses;
17.	Plane Geometry,	2 courses;
18.	Plane Trigonometry,	1 course;
19.	Advanced Algebra,	1 course;
20.	Solid Geometry,	1 course;
21.	Botany,	2 courses;
22.	Physics,	2 courses;
23.	Chemistry,	3 courses;
24.	Zoölogy,	3 courses;
25.	Physical Geography,	1 course;
26.	Physiology,	1 course;
27.	Astronomy,	1 course;
28.	Drawing,	3 courses;
29.	Mechanic Arts,	3 courses;
30.	Military Science,	3 courses.

Not more than one course in Botany, Physics, Chemistry, or Zoölogy will be accepted for admission unless the work has been accompanied by laboratory or field work.

DEGREES.

Bachelor of Science in Agriculture.

The degree of Bachelor of Science in Agriculture will be conferred upon any student who satisfies all entrance requirements and satisfactorily completes forty-two college courses, of which at least ten courses (including a thesis) are in the College of Agriculture. The Dean of the College of Agriculture will act as the student's class officer and adviser, and will have authority to require the completion of the major subject and also such minor subjects as he may consider necessary or advisable collateral work; but such

minor requirements will not exceed six courses. With the exception of these major and minor courses, all work is elective, and the student may, in consultation with his major professor, freely choose any subject taught in the University which his previous studies have prepared him to undertake; but the recommendation of his major professor is necessary to graduation; and no degree will be conferred upon any student who has not received credit for at least forty-two full college courses, and spent at least one University year (three quarters) in resident study at this University.

For this degree the following forty-two courses are recommended. A course means a course of five class exercises a week for one quarter (twelve weeks), or their equivalent in laboratory or other practical work.

Mathematics,	2 courses;
One Modern Language,	3 courses;
Rhetoric,	2 courses;
English Literature,	1 course;
History,	2 courses;
Psychology,	1 course;
Economics,	1 course;
Sociology,	1 course;
Chemistry,	2 courses;
Physics,	1 course;
Biology,	1 course;
Geology,	1 course;
Agriculture,	1 course;
Entomology,	1 course;
Economic Botany,	1 course;
Horticulture,	3 courses;
Live Stock,	2 courses;
Surveying,	1 course;
Agricultural Chemistry,	1 course;
Rural Economics,	1 course;
Agricultural Science,	2 courses;
Economic Geology,	1 course;
History of Agriculture,	1 course;
Veterinary Science,	2 courses;
Thesis,	1 course.
	36 courses.
Military Work, Mechanic Arts, Gymnastics, Drawing, and Synoptic or Chapel Lectures,	6 courses.
	42 courses.

Schedule of Recitations.

The following schedule of recitations may be adopted:

Four Years Course.

HOUR.	FALL.	WINTER.	SPRING.
		FRESHMAN YEAR.	
8.00	Fruit Culture	Vegetable Gardening	
9.00	Chemistry 1	Chemistry 2	
10.00	Agriculture	Mathematics	Mathematics.
11.00		Stock Breeding	Economic Botany
		SOPHMORE YEAR.	
8.00	History of Agriculture.	Zoölogy	
9.00		Economics 2	Agr. Science
10.00	General Biology	Rural Economics	Agr. Chemistry
11.00	Rhetoric 1	Rhetoric 2	English Literature 2
		JUNIOR YEAR.	
8.00	Sociology 1		Entomology
9.00	German 1	German 2	German 3
10.00	Physics	Vet. Science	Stock Feeding
11.00	Plant Breeding	Surveying	
		SENIOR YEAR.	
8.00	Psychology		
9.00	Agr. Science	Vet. Science	American History
10.00			Thesis
11.00	General Geology	Modern History	Economic Geology

Bachelor of Agriculture.

Entrance Requirements.

Candidates for this degree will be admitted to the Freshman Class on the same conditions as candidates for the degree of Bachelor of Science in Agriculture, except that twenty-four courses will be accepted for admission in full standing.

College Requirements.

This degree will be conferred upon any student who satisfies the above entrance requirements and satisfactorily completes twenty-four college courses, of which at least ten courses (including a thesis) are in the College of Agriculture. Other requirements are the same as for the degree of Bachelor of Science in Agriculture.

For this degree the following twenty-four courses are recommended:

The Two Years Course.

Rhetoric,	1 course;
English Literature,	1 course;
Chemistry,	2 courses;
Physics,	1 course;
Biology,	1 course;
Geology,	1 course;
Agriculture,	1 course;
Economic Entomology,	1 course;
Economic Botany,	1 course;
Horticulture,	3 courses;
Live Stock,	2 courses;
Surveying,	1 course;
Agricultural Chemistry,	1 course;
Rural Economics,	1 course;
Agricultural Science,	1 course;
Bookkeeping,	1 course;
History of Agriculture,	1 course;
Veterinary Science,	2 courses;
Thesis,	1 course.
	24 courses.

Schedule of Recitations.

The following schedule of recitations may be adopted:

Two Years Course.

FIRST YEAR.

HOUR.	FALL.	WINTER.	SPRING.
8.00	Fruit Culture	Vegetable Gardening	Bookkeeping
9.00	Chemistry	Chemistry	General Geology
10.00	Agriculture	Rural Economics	Agr. Chemistry
11.00	Rhetoric	Surveying	Economic Botany

SECOND YEAR.

8.00	History of Agriculture	Zoölogy	Entomology
9.00	English Literature	Vet. Science	Agr. Science
10.00	Physics	Vet. Science	Thesis.
11.00	Plant Breeding	Stock Breeding	Stock Feeding

Conditional Admission.

Students who have not had opportunity to make the preparation required for admission may enter the Preparatory School at the University and complete their preparation. If a student lacks only a part of the necessary preparation, he may be admitted conditionally, and complete his preparation while carrying on some of the studies of the College course.

The One Year Course.

This course consists of twelve courses selected from those included in the College of Agriculture. No entrance requirements are made for this course. A certificate indicating the work done will be granted on the completion of this course. It is confidently believed that many young men who are farmers, or expect to become farmers, will find it greatly to their advantage to devote one year to this course, if for any reason they cannot give the time necessary to complete a longer course.

Schedule of Recitations.

The following schedule of recitations may be adopted:

The One Year Course.

HOUR.	FALL.	WINTER.	SPRING.
8.00	Fruit Culture	Vegetable Gardening	Entomology
9.00	Chemistry	Chemistry	Agr. Science
10.00	Agriculture	Rural Economics	Agr. Chemistry
11.00	Plant Breeding	Stock Breeding	Stock Feeding

One Quarter Courses.

Two special twelve weeks courses are offered during the winter quarter.

Course One is so arranged that the One Year Course in Agriculture may be completed in three winter quarters. Its object is to provide a winter course for young farmers who may be able to spend only the winter at the University.

Course Two is a winter course in Veterinary Science, Stock Breeding, Stock Feeding, and a general study of animal industry. The purpose is not to make veterinary surgeons, but to enable students to properly diagnose the principal diseases among farm animals, to treat common accidents and to use preventive measures.

No entrance requirements are made for these courses.

DEPARTMENTS OF INSTRUCTION.

Only the technical courses are described here. For the other courses to be taken by students in the College of Agriculture, see the courses announced in the College of Arts and Sciences.

Agriculture.

Professor Atkeson and Mr. Atkeson.

1. **Agriculture.** First principles of agriculture; origin, cultivation, drainage, and classification of soils; indications of fertility; improvement of soils and their physical properties; principles of manures and manuring; production and handling of farm crops; preparation of land for the seed and subsequent care of the plant; pastures, meadows and forage, and a general study of farm machinery and buildings. Bailey's "Principles of Agriculture."

Fall and Winter, 10:00; A.

2. **Stock Breeding.** What is meant by breeding; how to attain the ideal; the principles of heredity; atavism, variation, selection, correlation, in-and-in breeding, controlling sex, parental, mental, environment, and climatic influences; history, characteristics, purposes and uses of the different breeds of domestic animals. Miles' "Stock Breeding;" Shaw's "Study of Breeds." Winter, 11:00; A.

3. **Stock Feeding.** Laws of animal nutrition; feeding stuffs; feeding farm animals; feeding for milk, muscle and fat; sources of food; how the animal uses food; preparation of food; study of rations and feeding standards; care and management of live stock, including poultry. Henry's "Feeds and Feeding."

Winter, 9:00; Spring, 11:00; A.

4. **Rural Economics.** Lectures and recitations. Farming as a business; methods of keeping farm accounts; a brief study of the laws that directly concern the farmer; how the farmer is affected by the general industrial and social conditions which determine and modify an intelligent prosecution of his business; the mutual relations of agriculture and other industries; value and prices, with especial reference to land and agricultural products; system of land tenure; general principles of co-operation; co-operative distribution, production, banking, and insurance; farmers' organizations, their objects, aims and purposes; farmers' institutes, and best methods of conducting them; a thorough study and investigation of every question involved in practical and successful agriculture. Haigh's "Manual of Farm Law;" Atkeson's "Bookkeeping for Farmers;" Myrick's "How to Co-operate." Winter, 10:00; A.

5. **History of Agriculture.** Lectures and recitations. A general history of Agriculture, beginning with the most ancient times,

tracing the history of Agriculture and agricultural methods through all ages to the present, with a special study of the present practices and methods of competing with foreign countries. Hoskyn's "Inquiry into the History of Agriculture;" De Candolle's "Origin of Cultivated Plants;" Flint's "One Hundred Years of Progress;" Mitchell's "Wet Days at Edgewood." Fall, 8:00; A.

6. **History of Commerce.** Lectures and recitations. Methods of exchange in ancient times; shipping of the ancients; fairs and markets; results of maritime discoveries; changing of commercial routes; international treaties affecting commerce; scientific and industrial discoveries affecting commerce; trade restriction; consuls; modern commerce; boards of trade; stock and produce exchanges; stock companies; corporations; modern transportation; freight companies; express companies; telegraph and telephone companies; warehouses, duties, insurance; modern methods of preparing and shipping articles of merchandise; circulation of commodities between cities and countries; jobbing and commission business; trade statistics; dependence of manufacturers upon producers of raw material; nomenclature of commerce. Text-books, Tilden's "Commercial Geography;" Chisholm's "Commercial Geography." Winter, 9:00; A.

7. **Agricultural Science.** Lectures and recitations. General relation of soil and air to plants. The atmosphere as a source of plant food; relations of water to the soil; movements of water in the soil; soils as chemical agents; manures and manuring; chemical fertilizers; potassic manures; magnesium, sodium and lime compounds. Aikman's "Manures and Manuring." Spring, 8:00; A.

8. **Advanced Agricultural Science.** Farmyard manures; green manuring; humus and vegetable moulds; composts and modes of applying manures; theory of the rotation of crops; irrigation; growth of crops; maintenance of meadows and pasture lands, and a general discussion of the methods of extensive and intensive farming. Storer's "Agriculture." Fall, 9:00; A.

9. **Farm Equipment.** Selecting, planting, and equipping farms; planning and erecting farm buildings and fences; building roads; farm vehicles and machinery; farm implements and the application of different kinds of power for farm purposes.

Half course. Fall, 11:00; A.

10. **Poultry Industry.** Lectures and recitations. Study of breeds of poultry. Discussion of equipment, including houses, incubators, and numerous mechanical appliances necessary to the business. Artificial and natural incubation. Breeding, feeding, and care of poultry. Poultry farming as a business. Text-books, Stoddard's "The New Egg Farm;" Felch's "Poultry Culture."

Half course. Fall, 11:00; A.

Horticulture and Forestry.

Professor Corbett.

The instruction offered in the department of Horticulture is made thoroughly practical, and especial stress is laid upon those branches which are particularly suited to the conditions of West Virginia.

1. **Plant Propagation.** The instruction offered under this heading is for the purpose of preparing the student for the courses in Fruit Culture and Vegetable Gardening by explaining the theory of plant life, the essentials for its existence and the means at man's disposal for providing these conditions. The topics considered are germination, multiplication by cuttings, layers, stolons, buds, grafts, etc., the processes of reproduction, such as pollination and its effects upon plant structures; value of artificial pollination and how accomplished. Fall, 8:00; A.

Heretofore this work has been made a part of the regular course in Fruit Culture, but it is now deemed best to amplify it and make it a full course, thus allowing more time to both Plant Propagation and to Fruit Culture.

2. **Fruit Culture.** This course is intended to familiarize the student with all classes of fruits of the north temperate zone; their propagation, culture, and pruning, treatment to prevent injuries from insects and diseases. The classroom exercises are enforced by actual practice in budding, pruning, and planting trees, together with practical work in the preparation and application of insecticides and fungicides. A knowledge of the elements of Botany is almost a necessity, in order that the student make progress in this course. The instruction is mainly given through lectures, from which the students are required to take notes. The notes so taken are considered a part of the regular work of the course, and the fullness, neatness and accuracy with which this work is done is considered in making up the final grade of the student. The lectures are, so far as the equipment of the institution will permit, supplemented by practical exercises. Winter, 8:00; A.

3. **Vegetable Gardening.** Greenhouse construction and management. Lectures and recitations on the origin, propagation, cultivation, insect enemies, and fungus diseases of garden vegetables, together with practice in the planting and cultivation of these vegetables in the garden; the laying out of home grounds, and the construction and management of greenhouses. The requirements for this course are the same as for Course 1, and the class exercises are conducted in like manner. Spring, 8:00; A.

4. **Plant Breeding.** This course is designed to meet the requirements of those who wish to prepare themselves to become florists,

nurserymen or practical fruit growers, as well as those who expect to teach. A study of the methods of plant breeding, evolution and heredity, as applied to cultivated plants, are its chief features.

Prerequisites: Courses 1 and 2 or 3, 4 and 5 in Botany, together with Courses 1 and 2 in Horticulture.

Fall, 11:00; A.

5. **Forestry.** This course is devoted to the consideration of the forestry problems presented to the United States.

The importance of groves and shelter belts for the protection of growing crops, the necessity for the maintenance of a forest cover to insure adequate and lasting water supplies, and for the maintenance of equable climate, as well as the preservation of a future timber supply, are questions receiving consideration in this course. This work is elective and is open to any student in the University who has had elementary training in Botany. Lectures and recitations.

Winter, 11:00; A.

Veterinary Science.

Professor Ruhl.

The object of this department is to give students such instruction in Veterinary Science as will enable them to diagnose, and treat intelligently, the common diseases of domestic animals.

1. **Anatomy and Operative Surgery.** This course will include lectures, recitations and clinical instruction illustrated by charts and various appliances. Dissections and actual operations by advanced students. Chaureau's "Anatomy;" Williams' "Operative Surgery." Winter, 9:00 A. M.; A.

2. **Theory and Practice.** Instruction will consist mainly of lectures upon the classification, causes, nature, symptoms, diagnosis, pragnosis, treatment and termination of the different diseases. Williams' "Principles and Practice of Veterinary Medicine." Steele's "Cattle Practice." Winter, 10:00 A. M.; A.

3. **Clinical Instruction.** This course is arranged especially for advanced students, who have had Courses 1 and 2, and will consist mainly of practical work, under direction. An effort will be made to supply a variety of material. Cases will be assigned and students will be required to report the same. Patient visiting will also be required. Examination for soundness, detection and location of lameness and physical diagnosis. Different methods of shoeing to relieve lameness, and care of the feet.

Winter. Hour arranged to accommodate class.

Economic Entomology.

Professor Hopkins and Mr. Rumsey.

1. **Economic Entomology.** This course will be conducted with a view to stimulating an interest in the study of insect life, and giving instruction along lines especially suited to the needs of the agricultural student. Text-books and laboratory demonstrations will be used to give such elementary instruction in economic and systematic Entomology as will give the student a general knowledge of the science, and instruction in the application of this knowledge will be given by means of practical field and research work.

Spring, 8:00; A.

Economic Botany.

Mr. Rumsey.

1. **Economic Botany.** (a) Phanerogams. Practical and comparative studies of seeds, seedlings and the organs of mature plants. The growth, dissemination, duration and eradication of weeds. Herbarium work. (b) Cryptogams. An outline study of ferns, mosses and fungi.

This course is designed especially for agricultural students, but will also be of value to all those interested in the subject of Botany, for the practical work of the laboratory will bring the student in closer touch with nature, and teach him to see and more fully understand the valuable and interesting phases of the plant world. Prerequisites, Elementary Botany as given in the Preparatory Department of the University or its equivalent. Spring, 11:00; A.

Agricultural Chemistry.

Professor Hite.

1. **Agricultural Chemistry.** A course of lectures on the application of chemical principles to farm economy. The relation of Chemistry to Agriculture; relation of the plant to soil and air; sources of plant food; osmosis and osmotic pressure; mechanism of plant nutrition; germination and elaboration of plant tissue. Soils: their origin, formation, composition, classification, deterioration, and improvement. Nitrification of soils. Prerequisite, general elementary Chemistry. Reference book, Johnson's "Agricultural Chemistry." Spring, 10:00; A.

2. **Agricultural Chemical Analysis.** This course includes the analysis of farm products, soils, ashes, fertilizers, mineral and drinking waters, etc. Prerequisites, Qualitative and Quantitative Analysis and Agricultural Chemistry 1. Laboratory guide, Wiley's "Principles and Practice of Agricultural Chemical Analysis."

Summer, Fall, Winter, Spring, 2:00; A.

Theses.

A thesis upon a subject in Agriculture or some closely allied branch of study will be required of each student who graduates. The subject must be selected in conference with the Dean of the College of Agriculture, and will involve original investigation of a character intended to bring out the full abilities of the graduate.

Agricultural Society.

An Agricultural Society has been organized, which meets weekly, for the discussion of current and scientific topics in Agriculture and related subjects. All agricultural students are expected to join this society and perform such work as its rules requires.

Library.

The Agricultural Experiment Station Library, composed of thousands of books on agricultural subjects, and much of the current agricultural literature, and the regular University Library, are placed at the service of the students in the College of Agriculture.

Agricultural Home Reading Course.

Since it is impossible for a great majority of the farmers of the state to attend the College of Agriculture, the Faculty has determined to do all it can to take the College to the farmer, by offering a systematic course of Home Reading in Agriculture. It is not expected that this course will in any sense take the place of a regular course at the College, but it is expected that every one who faithfully pursues this carefully prepared course upon technical agriculture, horticulture, stock-growing, rural economy, and kindred subjects, will be vastly benefited thereby.

This course is open to all, there being no requirements as to age, sex, or previous preparation, and no examination is required for admission.

No fee is charged for registering students in this course.

The course may be begun at any time, and carried on as rapidly or as slowly as may be desirable. The subjects may be taken up in any order desired, and any part of the course taken without the rest. The whole course is divided into four divisions, but a regular course may consist of any two of the four divisions, or the student may elect any ten of the twenty subjects given.

Certificates.

Any student who has completed a subject will, upon notifying the Dean, receive an examination paper on that subject, to which written answers are to be returned, accompanied with a statement

upon honor that the answers are the unaided work of the person sending them. These answers will be graded, and any one receiving a grade of 75 per cent. or more in the studies of any two divisions will receive a suitable certificate signed by the President of the Board of Regents, President of the University and the Dean of the College. For this certificate a charge of one dollar will be made, which is only sufficient to cover the actual cost of material and engraving.

Local Circles.

Individuals may take the course by themselves, wholly independent of anyone else. Much mutual benefit will be derived, however, by the formation of local reading circles of from five to twenty members, which may meet at regular times for study and discussion, and it is urged that this be done whenever possible.

It is suggested, also, that farmers' organizations—granges, farmers' clubs, etc.—may add to the interest and profit of their meetings by taking up the course or such portions of it as may be of special interest to them.

Only one set of books need be purchased for each reading circle, grange or club, although it is believed that a greater interest in the work will be secured by having at least one book for each member.

One book at a time may be purchased by the individual student or the reading circle, if circumstances make this desirable.

The text-books selected for this course are standard works, fully illustrated and neatly bound, revised and brought up to date. They contain in all cases a plain, practical presentation of the scientific principles underlying the best practices in the different departments of farming, stock-raising and gardening. The scientific terms used are fully explained.

All students are expected to ask for assistance whenever difficult problems are encountered or any passages are found in the books that are not perfectly clear.

Illustrative Material.

Special attention is called to the fact that the course of study here laid down is a study of the materials and processes going on upon the farm, and that the text-book should be used as an aid to direct personal observation and study of the things themselves and not as a substitute for it. In this respect an agricultural course has advantages over many others, and it is hoped that no one will forego these advantages and confine his work to the text-book alone.

Books at Reduced Rates.

Arrangements have been made with The Orange Judd Co., 52-54 Lafayette Place, New York, by which the books required will be furnished to students of this course only at the prices named, which are

a great reduction from regular retail rates. These prices include postage and are payable strictly in advance.

Division I.—Crop Production.	Postpaid.
Plant Life on the Farm—Masters	$ .75
Soils and Crops—Morrow & Hunt	.75
Manures and Manuring—Aikman	2.25
The Soil—King	.57
Tile Drainage—Chamberlain	.27
Division II.—Live Stock Production.	
Feeds and Feeding—Henry	1.60
Study of Breeds—Shaw	1.00
Swine Husbandry—Coburn	1.17
American Dairying—Gurler	.75
Poultry Culture—Felch	1.13
Division III.—Horticulture and Floriculture.	
The Propagation of Plants—Fuller	.99
The Fruit Garden—Barry	1.32
Insects and Insecticides—Weed	1.00
Practical Floriculture—Henderson	.99
Spraying—Lodeman	.75

Division IV.—Rural Economy.	Postpaid.
Bookkeeping for Farmers—Atkeson	$ .15
Farm Law—Bennett	.50
How to Co-operate—Myrick	.50
The Farmstead—Roberts	1.00
Chemistry of Cookery—Williams	1.13

Directions for Ordering Books.

Orders for books should be addressed directly to The Orange Judd Co., and should in all cases be accompanied by a postal or express money order or draft, payable to the above firm, for the full amount of the order.

All communications in regard to the Agricultural Home Reading Course should be addressed to the Dean of the College of Agriculture.

THE WEST VIRGINIA AGRICULTURAL EXPERIMENT STATION.

BOARD OF CONTROL.

The Regents of the West Virginia University.

Station Committee.

George C. Sturgiss. James L. Hamill.
James F. Brown.

Station Staff.

J. H. STEWART, A.M., Director and Agriculturist.

A. D. HOPKINS, Ph.D., Vice-Director and Entomologist.

B. H. HITE, M.S., Chemist.

L. C. CORBETT, M.S., Horticulturist.

W. E. RUMSEY, B.S.Agr., Assistant Entomologist.

HORACE ATWOOD, M.S.Agr., Assistant Agriculturist.

C. D. HOWARD, B.S., Assistant Chemist.

E. C. FRAME, Clerk and Stenographer.

M. A. STEWART, Librarian.

The Experiment Station is a distinct and separate department of the University, and was established by the Board of Regents in 1887, by authority of an Act of Congress, known as the Hatch Act, which was passed on the 2d day of March of that year. The funds for carrying on the operations of the Station, with the exception of its meagre earnings, are derived wholly from the general government. The aforesaid Act in section 2 fully states the object and purposes of the Experiment Station as follows:

"That it shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of

grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches and experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states and territories."

Bulletins and annual reports are published frequently at the Station for gratuitous distribution, as far as the capacity of the Experiment Station will permit, and will be mailed regularly, free, to any citizen of the state applying for the same.

The Station invites correspondence, suggestions, and advice from farmers and others interested in this work, and all such, with reference to bulletins, experiments, or any matter relating to agriculture, will be welcomed and will receive careful and prompt attention. Correspondence may be addressed to the Director of the Station, or to individual members of the Station Staff.

THE COLLEGE OF LAW.

The Faculty.

JEROME HALL RAYMOND, Ph.D., President.

OKEY JOHNSON, A.M., LL.B., Dean, and Professor of Constitutional and International Law, and the Law of Corporations.

ST. GEORGE TUCKER BROOKE, LL.D., Professor of Common and Statute Law.

WILLIAM P. WILLEY, A.M., Professor of Equity Jurisprudence and Commercial Law.

EDGAR STEWART, LL.B., Assistant in Law.

HARRY SANGER RICHARDS, Ph.B., LL.B., Lecturer in Law (Summer Quarter).

THOMAS PERRY JACOBS, A.M., Lecturer in Law (Summer Quarter).

Courses Offered in the College of Law.

The College of Law offers two courses:

1. The four years course leading to the degree of Bachelor of Laws. The first two of the four years of this course are devoted to such general culture studies as are most essential to a lawyer; the last two years of the course are exclusively devoted to professional law work.

2. The two years course, which does not lead to any degree. A student who completes this course will receive a certificate, which, upon presentation, will admit him to practice law in any court in West Virginia. The subjects taught in this course are the same as those taught in the Junior and Senior years in the four years course.

Conditions of Admission.

Candidates for admission must present certificates of good moral character, and if from other colleges or universities must bring letters of honorable dismissal.

Entrance Subjects and Requirements.

The Four Years Degree Course.

For meeting the requirements for admission, candidates are offered a choice of seventy-seven preparatory courses in thirty subjects. A "course" represents the amount of work done by a class

meeting five times a week for one quarter (twelve weeks). The entrance subjects are all reduced to the unit of a course, and placed on exact equality. Thirty-nine courses will be accepted for admission to the four years degree course in full standing, and these may be selected by the candidate from among the following seventy-seven courses:

1.	English Grammar,	2 courses;
2.	English Composition and Rhetoric,	5 courses;
3.	English Literature,	2 courses;
4.	Latin,	9 courses;
5.	Greek,	6 courses;
6.	French,	6 courses;
7.	German,	9 courses;
8.	Greek History,	1 course;
9.	Roman History,	1 course;
10.	Mediaeval History,	1 course;
11.	Modern History,	1 course;
12.	English History,	1 course;
13.	American History,	1 course;
14.	Civil Government,	1 course;
15.	Arithmetic,	1 course;
16.	Elementary Algebra,	3 courses;
17.	Plane Geometry,	2 courses;
18.	Plane Trigonometry,	1 course;
19.	Advanced Algebra,	1 course;
20.	Solid Geometry,	1 course;
21.	Botany,	2 courses;
22.	Physics,	2 courses;
23.	Chemistry,	3 courses;
24.	Zoölogy,	3 courses;
25.	Physical Geography,	1 course;
26.	Physiology,	1 course;
27.	Astronomy,	1 course;
28.	Drawing,	3 courses;
29.	Mechanic Arts,	3 courses;
30.	Military Science,	3 courses.

Not more than one course in Botany, Physics, Chemistry, or Zoölogy will be accepted for admission unless the work has been accompanied by laboratory or field work.

Certificates from accredited schools will be accepted in place of entrance examinations.

The Two Years Certificate Course.

Until July 1, 1901, twenty-four of the above preparatory courses will be accepted for admission to the two years certificate course.

After July 1, 1901, thirty-nine of the foregoing courses will be required for admission to the two years certificate course.

Special Students.

Persons who are at least twenty-one years of age, and who are not candidates for a degree or for a certificate, but who desire to prepare for the examination for admission to the bar, will be admitted to the College of Law as special students.

Conditional Admission.

Students who have not had opportunity to make the preparation required for admission may enter the Preparatory School at the University and complete their preparation. If a student lacks only a part of the necessary preparation, he may be admitted conditionally, and complete his preparation while carrying on some of the studies of the Freshman year.

Advanced Standing.

A candidate for advanced standing may receive credit for so many of the courses required in the Junior year as he may be able to pass satisfactorily upon examination before the Faculty of the Law College; but no credit for advanced standing will be given for any Senior course. No diploma will be granted to any student, or degree conferred upon him, unless he has been in actual attendance upon the lectures during at least three quarters. Examinations for advanced standing will be held by the Faculty of the Law College on the third, fourth, and fifth days of each Fall Quarter.

DEGREES.

Bachelor of Arts in Law.

The degree of Bachelor of Arts in Law, which has been heretofore awarded, will not be offered or awarded after July 1, 1901. Students who are now pursuing the course, and who may be able to complete it before the date named, will be awarded the degree, or they may choose between that degree and the degree of Bachelor of Laws.

Bachelor of Laws.

The degree of Bachelor of Laws will be conferred upon any student who satisfies all entrance requirements, and satisfactorily completes twenty-one college courses in general culture, and twenty-one courses in law. The twenty-one courses in law, (of which one course must be a thesis), constitute the regular two years law course. Graduates of West Virginia University or other colleges or

universities of recognized standing, and students who have completed two full years of a college course at a recognized college, are not required to take the twenty-one college courses in general culture, but are admitted immediately to the Junior class, and may complete the course and receive the degree of Bachelor of Laws in two years.

Bachelor of Arts With Law as Major Study.

A student in the College of Arts and Sciences may elect ten courses (including a thesis) in law to count toward the degree of Bachelor of Arts. A student who has received credit for ten courses in law before receiving the degree of Bachelor of Arts, may finish the remainder of the law course and receive the degree of Bachelor of Laws by an additional year's work in law, provided that in that time he is able to take all of the remaining courses required for the degree of Bachelor of Laws. By this arrangement a student may take the degrees of Bachelor of Arts and Bachelor of Laws in five years after completing his preparatory course.

Master of Laws.

The degree of Master of Laws will be conferred on any graduate of this College of Law who has previously received the degree of Bachelor of Laws or Bachelor of Arts in Law, who pursues the study of law in this College for one year after graduation, and who completes to the satisfaction of the Faculty of the College of Law such a course of study as may be required, and who at the end of the year presents to the Faculty a satisfactory thesis on some legal subject to be selected by the student with the approval of the Law Faculty; and the privilege thus extended to graduates of this College of Law is also extended to graduates of other law schools of equal grade.

This course will consist mainly of original investigation, under the direction of the Faculty of the College of Law. Most of the work will be done in the Law Library, the "lawyer's laboratory." Legal questions will be given for solution, and cases to be analyzed. Cases without syllabi will be given to the student, who will be required to make a complete report of each case,—the questions involved, how they arose, the pleadings, how the case was decided in the inferior court, how it was decided in the Appellate Court on appeal or writ of error, and the grounds on which the decision was made. The syllabus of the case will then be required, careful distinction being made between the decision and the mere obiter dictum of the judge who announced the decision.

Courses of Instruction.

There is no prescribed order in which a student in the four years degree course must take the general culture courses above indicated, which are required in the Freshman and Sophomore years. Each student will arrange with his class officer at the beginning of each quarter as to the courses he will take during that quarter. The class officer will use his judgment in the assignment of studies. It is his duty to see that each student under his charge takes work which will be most beneficial.

The studies of the Junior and Senior years constitute the professional course in Law. These studies are all required, and must be taken in a specified order unless special permission is obtained to vary that order. Students who are taking the two years certificate course have the same studies as Juniors and Seniors in the four years degree course.

The professional course offered by the College of Law is the full, complete, and comprehensive course of the modern law school, which will prepare students for the practice of Law in any part of the United States.

The aim of the College of Law is to make not merely theoretical, but practical lawyers, who will go from the lecture-room to the bar thoroughly equipped for the active duties of the profession. It aims, moreover, while making thorough lawyers, to give the student a correct conception of the scope and character of the profession, and to start him in life with high ideals of professional ethics and dignity.

The methods of instruction consist of lectures, references to illustrative cases, examinations from approved text-books, quizzes on lectures, the drawing of the various legal papers requisite in the ordinary practice of the law, and practice in moot courts. There are oral examinations daily on the subjects of the lectures and the text-books used, and comprehensive written examinations on each topic or branch of law as completed.

The professional part of the regular Law Course is designed to occupy the student two full years, and is divided between the College quarters in such a manner that students may with advantage enter at the beginning of any quarter and complete and obtain credit for the branches taught during that quarter. The following schedule shows the division of the quarters and subjects studied during the Junior and Senior years:

Professional Courses in Law.

Junior Year.

Fall Quarter.

Blackstone. Professor Brooke. Full course. 8.00.

Contracts. Professor Willey. Full course. 9.00.

Agency. ProfessorJohnson. Half course. Last six weeks, 10.00.

Criminal Law. Professor Johnson.
Two-thirds course. First eight weeks, 11.00.

Parliamentary Law. ProfessorJohnson.
One-third course. Last four weeks, 11.00.

Winter Quarter.

Blackstone. Professor Brooke. Full course. 8.00.

Negotiable Paper. Professor Willey.
One-third course. First four weeks, 9.00.

Suretyship and Guaranty. Professor Willey.
One-third course. Second four weeks, 9.00.

Bailments. Professor Willey.
One-third course. Last four weeks, 9.00.

Criminal Procedure. Professor Johnson. Full course. 11.00.

Spring Quarter.

Blackstone. Professor Brooke. Full course. 8.00.

International Law. Professor Johnson. Full course. 9.00.

***Engineering Jurisprudence.** Professor Johnson.
Half course. First six weeks, 10.00.

Civil and Criminal Evidence. Professor Willey. Full course. 11.00.

Senior Year.

Fall Quarter.

Corporations. Professor Johnson. Full course. 9.00.

Common Law Pleading and Practice. Professor Brooke.
Full course. 10.00.

Equity and Equity Pleading. Professor Willey. Full course. 11.00.

Winter Quarter.

Constitutional Law. Professor Johnson. Full course. 9.00.

Real Property. Professor Brooke. Full course. 10.00.

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*Elective. This course is not required of candidates for a law degree, and is inserted here only to show the time at which it is given.

Equity and Equity Pleading. Professor Willey. Full course. 11.00.

Court Practice. Professors Johnson, Brooke, Willey.
Two-thirds course.

Spring Quarter.

Sales. Professor Willey. Half course. First six weeks, 9.00.

Partnership. Professor Willey. Half course. Last six weeks, 9.00.

Torts. Professor Brooke. Full course. 10.00.

Damages. Professor Johnson. Half course. First six weeks, 11.00.

The Young Lawyer in Practice. Professor Johnson.
Half course. Last six weeks, 11.00.

Court Practice. Professors Johnson, Brooke, Willey.
Two-thirds course.

Thesis. One course.

Text Books.

The text-books used in the course are carefully selected and are such as will be useful to the student throughout his professional career. They are all kept at the University and sold to the students at a discount from the regular prices. They are as follows:

Blackstone's Commentaries.
Clark on Contracts.
Elliott on Insurance.
Clark on Criminal Law.
Clark on Criminal Procedure.
Norton on Negotiable Paper.
Hale on Bailments.
Huffcut on Agency.
Hale on Damages.
Cooley's Principles of the Constitution.
Shipman's Common Law Pleading and Equity Pleading.
Brooke's Notes on Pleading and Practice in West Virginia.
Clark on Corporations.
Fetter's Equity.
Williams' Real Property.
Glenn's International Law.
Pollock on Torts.
Underhill's Evidence.
Tiffany on Sales.
George on Partnership.
Robert's Rules of Order.

Expenses.

To West Virginia students tuition is free.

To students from other states tuition is $8 per quarter (twelve weeks.)

The matriculation fee, payable by all students upon entering the University, is $5. Unless a student remains out of the University more than three years, the matriculation fee is paid but once by each student.

The contingent fee, payable by all students, is $2 per quarter.

Board and room may be obtained in Morgantown at from $3 to $4 per week.

The text-books absolutely essential to the student in pursuing the prescribed course of study are not numerous or costly, and are such as will be useful to him throughout his professional career.

Examinations for Admission to the Bar.

It is made the duty of the Law Faculty by the laws of the state to examine all applicants for admission to practice law. These examinations are held at the University on the first Wednesdays in February, May, August, and November.

The only requirement for admission to these examinations is that the applicant shall have studied law for two years either in private or at some law school. The examination covers the branches taught in the Junior and Senior years (the prescribed professional course) in this Law College.

Law Library.

Heretofore the great want of the Law College has been a proper Library, a suitable room for it, and a Librarian. By the opening of the next school year all these will be provided. The Library will still be too small, consisting of about sixteen hundred volumes in twelve hundred books. The books have been carefully selected and will greatly facilitate the work in the Law College.

Advantages of a University Law Course.

The increasing favor with which law schools are regarded is due to the higher standard of preparation necessary to enable a lawyer to attain eminence in his profession, as compared with a past age. The lawyer who now aspires to occupy a high position at the bar must be thoroughly equipped. The competition he must meet demands a broad culture, scholarly discipline and a thorough mastery of the principles of law. Law schools have largely contributed to the elevation of the standard. They are now regarded as essential in the legal profession as the medical college and theological seminary are to the medical and clerical professions.

The advantages of a university law course can scarcely be overestimated to the young man who aspires to become thoroughly fitted for the profession of law.

The almost universal experience is that when a young man sits

down in a law office to prepare for the bar he becomes impatient to engage in the active business of his profession with which he is surrounded. He makes haste to finish rather than master the course. The active practitioner under whom he is reading is engrossed with the cares of his business and gives him but little attention. He reads in a superficial manner enough branches to enable him to secure a license to practice, believing that he will have time enough when he is already admitted to the bar to finish his studies. But the groundwork of a successful professional career is forever neglected, as a rule, constantly proving the old maxim that "he who is not a good lawyer when he goes to the bar will seldom be a good one afterward."

The university course brings the student in constant association with those who are making mental discipline a business; it surrounds him with influences that are elevating and refining; produces habits of application which he will seldom acquire in any other place, and without which he will never make a lawyer.

The advantage of access to a large and well-selected law and miscellaneous library, and the valuable drill of the Literary Societies and Moot Courts are of no small consideration.

Moot Courts.

However familiar the student may be with the principles and theories of law in all its branches, he will be more or less awkward and confused when he goes to the bar and attempts for the first time to make a practical application of legal remedies, unless he has been previously drilled on this behalf. The Moot Court supplies, as well as anything other than a judicial tribunal can do, the drill and discipline necessary to prepare the student for the trial tables. In these courts he is taught to apply legal remedies according to the common law and chancery systems of practice; to bring suits; draw papers, pleadings, briefs, etc., and take the various steps incident to bringing a cause to trial, and then to try it according to the rules of evidence, including the argument, charge, verdict, motion in arrest of judgment, writ of error, etc. The Moot Court is organized in strict conformity to the practice of the regular courts in all its details. The students themselves act respectively as counsel, jurors, witnesses and officers of the court, thus learning by actual doing all the forms of court practice; while a professor sits as judge, with the double aim of illustrating the legal principle involved and explaining the rules of practice. The grammatical accuracy, rhetoric, elocution and courtesy of deportment of students also come under review of the professor, and the young men are thus fitted to appear and conduct themselves at the bar as gentlemen and scholars as well as lawyers. The system of Moot Courts is thorough.

Each of the professors holds court once a week, in his room, for the trial of law cases.

There is a Supreme Court of Appeals, composed of all three professors, the Dean sitting as president of the court, to which all appeals from decrees and writs of error to judgments rendered in the three several Circuit Courts may be taken. The system works admirably, and gives the student the practice in all the courts, following his case from the Circuit Court, where it is brought, to the Supreme Court of Appeals, which determines finally all cases. Trials are occasionally held in Commencement Hall, and are open to the public.

Eminent Opinions.

The time has gone by when an eminent lawyer, in full practice, can take a class of students into his office and become their teacher. Once that was practicable, but now it is not. The consequence is that law schools are now a necessity.—The Late Chief Justice Waite.

There is little, if any, dispute now as to the relative merit of education by means of law schools and that to be got by mere practical training or apprenticeship as an attorney's clerk. Without disparagement of mere practical advantages, the verdict of the best informed is in favor of the best schools.—Report of the Committee on Legal Education to the American Bar Association, August 21, 1879, at Saratoga, New York.

Professor Bryce, in "The American Commonwealth," attributes the superior attainments of the members of the legal profession in the United States "to the extraordinary excellence of many of the law schools."

Mr. Herron, of Dublin, in his work on the history of Jurisprudence, declares that in the matter of legal reform, and in that of legal authorship, the United States have surpassed England, and he attributes the fact "to the superior legal education which the American lawyers receive and to the schools of law established throughout the United States."

SCHOOL OF MUSIC.

Faculty.

JEROME HALL RAYMOND, Ph.D., President.

CHARLES ALFRED ELLENBERGER, Director, and Professor of Music.

RUSSELL McMURPHY, Instructor on the Piano.

GRACE MARTIN, B.M., Instructor on the Piano.

THOMAS GETZANDANER HILL, Instructor on Brass and Wood Wind Instruments.

FLORENCE MADISON SLITER, Instructor on the Violin and Viola.

THEODORE CHRISTIAN RUDE, Instructor on the Mandolin, Guitar, Banjo, and other Stringed Instruments.

MARIE HESTER, Instructor in Voice.

ADA VIRGINIA HOUSTON, Assistant on the Piano.

Origin and Purpose.

The School of Music is an integral part of the University, having been organized as such in 1897, and owes its inception to the need, long felt by the patrons and friends of the University, of a well-equipped department of Music, in connection with the other departments, where young men and women of the state might have the opportunity of securing thorough musical training with other necessary educational advantages, and at reasonable cost. It is also a recognized fact that the æsthetic influence of a good School of Music upon the student body in general is most beneficial.

Courses of Study.

The instruction in the School of Music is based upon the most approved and practical modern methods in Piano-forte and Organ playing, Voice Culture, Violin, Viola, Violincello, Mandolin, Guitar, Banjo, Cornet, Clarionet, and other Brass, and Reed, Band and Orchestral instruments, Harmony, Theory, Musical History, Sight Singing, and kindred branches. A distinguishing feature of this department is the cultivation of those allied branches which, in connection with the special courses, go to make the student not merely a trained executant, but a broad and liberal musician in the best sense of the word.

Special Advantages.

Many advantages accrue to the student in a School of Music connected with a University. Opportunities are afforded of studying in the various other departments, thus securing to the Music student a symmetrical education, literary and scientific, as well as musical. On the other hand, the existence of a department of Music affords advantages in musical training to the students in all the other departments.

Instruction is furnished free of charge in a number of branches, while in others the tuition fees are merely nominal.

Credit for Music on College Courses.

By special action of the University Faculty a certain amount of credit is allowed toward baccalaureate degrees for work in Music.

1. A candidate for the degree of Bachelor of Arts or Bachelor of Science may elect three courses in Music to be credited toward the degree.

2. At least two of the courses in Music for which credit is given must be in the Science of Music,—that is, in Harmony, or in Counterpoint, or in the Theory of Music, or in Analysis.

3. No credit toward degrees will be given for the first three courses in Piano, Violin or other stringed instruments, or Voice.

Building and Equipment.

The School of Music occupies a separate building, fitted up especially for its needs. The rooms, both for teaching, and practice purposes, are large, with high ceilings, electric light, and natural gas heat. It is located in the heart of the town, and convenient of access. The equipment of pianos is of the best, and all the instruments are new. The large and commodious Chapel, seating 1,600 people, contains a fine Knabe Concert Grand Piano, and a large three-manual Pipe Organ. Excellent opportunities are thus afforded for recital and concert work.

Time Required to Complete a Grade.

Attention is called to the fact that the time required to complete a grade depends upon the student's talent, age, previous instruction, and amount of daily practice. With good health and thoroughly systematized work, a grade (three courses) should be completed in a year.

Requirements for Diploma and Certificate.

A course in sight reading, memorizing, and technical work is followed through all the courses. A knowledge of Harmony, Theory

and Musical History is essential to an intelligent interpretation of Music. Elementary study in these three branches is required for completion of the third grade. Students completing the fourth grade will be entitled to a certificate. A candidate for a diploma must complete the required courses of study of some instrument or Voice, together with two courses in Harmony, passing satisfactory examinations thereon, and must perform in public during the last year of study an entire concert program to test his or her ability to interpret correctly the different schools of composition. Candidates for a diploma in Voice Culture, in addition to the above, must satisfactorily complete the first two grades in the Piano course, and at least two courses in German and Italian.

Candidates for a fourth grade certificate must pass a satisfactory examination in Sight Reading, Memorizing, Technique, Musical History, and have taken at least one course in Harmony.

Recitals.

A very necessary part of a student's education is the development of confidence, which can only be acquired by appearing occasionally before an audience. To meet this need, Students' Recitals have been established, some of which are open to the public, others only to the intimate friends of the participants. There are also Faculty Recitals and classroom Recitals, at which different styles of compositions are analyzed and rendered, tracing the historic development from the Classic to the Romantic period.

Tuition.

Students whose work is all in the School of Music are not required to pay the usual University fees, but are entitled to all the privileges of the other University students, including the numerous public lectures, which are given frequently by eminent specialists.

The fees are as follows:

Tuition Per Quarter, Two Lessons Per Week, 30 Minutes Each:

Piano (with head of department)	$12.00
Piano (with instructor)	8.00
Piano (with assistant)	6.00
Voice Culture	12.00
Violin, and Viola, each	8.00
Mandolin, Guitar, and Banjo, each	6.00
Harmony	18.00
Pipe Organ	20.00
Wood, and Brass, Wind Instruments	6.00

When students of Violin, Viola, Mandolin, Guitar, and Banjo, become sufficiently advanced to be admitted to membership in the

Orchestra, or the advanced Mandolin and Guitar Club, tuition fees in these instruments will be remitted upon recommendation of the leaders of these organizations.

Pianos for practice one hour per day will be furnished at $3.50 per quarter; two hours per day, $6.00 per quarter; three hours per day, $7.50 per quarter. Clavier practice, one hour per day, $2.00 per quarter.

A deposit of $2.00 for each branch studied—to be applied to the purchase of music, etc.,—is payable quarterly.

All tuition and other fees are payable in advance to the Director of the School of Music.

Free Advantages.

The recitals and concerts by the Faculty and advanced students of the School of Music are all free to students of the University.

The Choral Society, Glee Club, Women's Chorus, the Military Band, Orchestra, and Mandolin, Guitar and Banjo Clubs are all open to students of the University who are competent to enter them.

The courses in Violin, Viola, Mandolin, Guitar, Banjo, Banjeaurine, etc., are free to students of the University under certain conditions, as explained.

Piano students of the third and fourth grades will receive free instruction in elementary Theory and Musical History, one evening each week.

Courses of Instruction.

All the courses here announced are given every quarter, and may be begun at any time during the year, as the instruction is largely private.

Piano.

Miss McMurphy, Miss Martin and Miss Houston.

1, 2, 3. First Grade.—Emery's "Foundation Studies;" Studies by Gurlitt, Biehl, Bertini; Lynes' "Advancement Studies;" Compositions by Reinecke, Rohde, Emery, Lynes, Kullak, and others.

4, 5, 6. Second Grade.—Studies by Czerny, Loeschorn, Heller, Krause, Clementi's Sonatinas; Kunz's Canons; "Schumann Album for the Young;" Compositions by Krause, Kullak, Emery, and other modern writers.

7, 8, 9. Third Grade.—Czerny's "Forty Daily Studies;" "Octave Studies" by Turner and Kullak; Bach's "Little Preludes and Fugues", and "Two Part Inventions;" Easier Sonatas of Haydn and Mozart; Mendelssohn's "Songs Without Words;" Compositions by Godard, Schumann, and others.

10, 11, 12. **Fourth Grade.**—Moscheles' opus 70; Kullak's "Octave Studies;" Clementi's "Gradus ad Parnassum;" Bach's "Suites" and "Three Part Inventions;" Sonatas by Haydn, Mozart, Beethoven; Compositions by Chopin, Schumann, Mendelssohn, Raff, Moszkowski, Schubert, Grieg, and others.

13, 14, 15. **Fifth Grade.**—Chopin's op. 10 and 25, and Preludes; Bach's "Preludes and Fugues;" Sonatas by Beethoven; Concertos by Beethoven, Mozart, Mendelssohn; Compositions by Liszt, Henselt, Chopin, Weber, and others; Concertos for two pianos.

Organ.

Professor Ellenberger.

Organ students are expected to finish at least the first three grades in Piano before beginning Organ work.

1, 2, 3. **Third Grade.**—Stainer's "Organ Primer;" Whiting's "First Studies;" "Rink-Best Organ School," Book III; Bach's "Easy Preludes and Fugues;" Whiting's "The Organist;" Hymn Tunes and Registration; Compositions by Thayer, Silas, Volckmar, Guilmant, Lemmens, and others.

4, 5, 6. **Fourth Grade.**—"Rink-Best Organ School," Books IV and V; Bach's "Preludes and Fugues;" Accompaniment; Eddy's "Church and Concert Organist;" Anthems; Mendelssohn's Sonatas; Compositions by Guilmant, Merkle, Bach, and others; Whiting's "Twenty Preludes and Postludes."

7, 8, 9. **Fifth Grade.**—Bach's "Preludes and Fugues;" Sonatas by Mendelssohn, Guilmant, Merkle, Rheinberger; Compositions by modern composers.

Voice.

Professor Ellenberger and Mrs. Hester.

1, 2, 3. **First Grade.**—Breathing, control of throat, jaws, tongue, lips, etc.; tone placing; dictation exercises for special needs of individual voices; selected technical exercises; English Ballads and Songs.

4, 5, 6. **Second Grade.**—Breathing, tone placing, dictation exercises, with selected technical exercises from Marchesi, Bordesi, Nava, Panofka, Concone; English Ballads and Songs; German Lieder.

7, 8, 9. **Third Grade.**—Breathing, tone placing, dictation exercises, with selected technical exercises from Bordesi, Marchesi, Sieber; English and Italian Songs; German Lieder; English Oratorio; Concert Songs.

10, 11, 12. **Fourth Grade.**—Dictation exercises, with selected

technical exercises from Bordogni, Sieber, Marchesi, Lamperti, etc.; English Oratorio; Italian and German Operatic Selections; German Lieder; Concert Songs.

13, 14, 15. **Fifth Grade.**—Dictation exercises, with advanced technical exercises from Bordogni, Marchesi, Lamperti, Sieber, etc.; English Oratorio; Italian, French and German Opera; Bravura Singing.

Violin.

Miss Sliter.

1, 2, 3. **First Grade.**—Tour's "Primer;" exercises in the First Position; development of tone; Pleyel's duets, opus 8.

4, 5, 6. **Second Grade.**—Schradieck's "Technical School," Book I; First, Second and Third Positions; Kaiser's "Studies," opus 20; Pleyel's duets, opus 48; Solos in First Position.

7, 8, 9. **Third Grade.**—Schradieck's exercises in the higher Positions; Kreutzer's Etudes; Pleyel's duets, opus 59; Fantasias by Singelee, Alard, etc.; Airs Varie, DeBeriot.

10, 11, 12. **Fourth Grade.**—First Part of Fiorilio's Etudes; Maza's duets, opus 71; Krommer's Etudes, opus 22; Concertos by DeBeriot; Solos by Hauser, Wienawski, etc.

13, 14, 15. **Fifth Grade.**—Fiorilio's Etudes continued; Fantasias by Vieuxtemps, Alard, etc.; Concertos by Mendelssohn, Beethoven, Bruch, Sarasate.

Advanced students may study ensemble works in conjunction with pupils from the Piano department. They are also admitted to the orchestra.

Guitar, Banjo, and Mandolin.

Mr. Rude.

In response to the demand growing out of the popularity of these instruments, courses are offered in each. Special attention is given to the development of a systematic fingering for both hands, tone, touch and accurate execution.

Text-books for Guitar: Holland, Carcassi, Carulli, Sor.
Text-books for Banjo: Dobson, Stewart, Henning.
Text-book for Mandolin: "Branzoli's Method."
Selected Solos.

Wood and Brass Wind Instruments.

Mr. Hill.

Equivalents for the Foregoing.

The courses outlined for the various branches are simply intended to represent, in a general way, the character of each year's

work. It is not intended that each student shall take all of the studies mentioned in the branch he wishes to pursue, and equivalents are liberally used to suit individual cases.

Harmony.

Professor Ellenberger.

A thorough knowledge of elementary Harmony is absolutely essential to every musician, whether artist or amateur. The School of Music offers a course of study covering one year, which includes a knowledge of intervals and scales, formation and progression of chords, treatment of suspensions, open harmony, etc., with practical work in harmonizing chants and chorals, and analyzing simple compositions. Emery's "Elements of Harmony" is the text-book.

1. Intervals, scales, formation and progression of common chords, with their inversions; seventh chords, modulations, harmonizing bass progressions, close harmony.

2. Modulations, Suspensions, Open Harmony, Appogiatura, and passing notes, Organ point, harmonizing melodies.

3. Harmonizing Melodies, Double Chant, Chorals, etc.

General Announcements.

Students may enter the School of Music at any time, but it is greatly to their interest to enter, as far as possible, at the beginning of the quarter.

There will be no deduction for lessons missed by students, except in cases of prolonged illness.

Sheet music is furnished,—the best publications only,—at a discount.

The library contains a large number of standard works upon music, all of which are available to students.

Students entering the School of Music within the first three weeks of a quarter will be charged for the full quarter; after that time, for the remainder of the quarter, and one week additional.

Students of the School of Music are not allowed to take part in public programs, or in musical organizations, without the consent of their respective teachers, and the Director of the School of Music.

All music students are expected to attend the regular Students' Recitals, and to take part in them whenever so assigned.

All music students are expected to identify themselves with the various musical organizations of the school, and are required to enter any to which they are assigned by the Director of the School of Music.

Every music student is expected to attend all concerts given under the auspices of the University.

It is expected that all students will take sufficient work,—literary, or music, or both—to occupy their entire time.

The enrollment of private students for this year, in the School of Music, is 220.

All correspondence regarding this department should be addressed to

C. A. ELLENBERGER,
Director of the School of Music,
Morgantown, W. Va.

THE COMMERCIAL SCHOOL.

STAFF OF INSTRUCTION.

The Faculty.

JEROME HALL RAYMOND, Ph.D., President of the University, and Professor of Economics and Sociology.

DENNIS MARTIN WILLIS, LL.B., Principal of the Commercial School, and Instructor in Bookkeeping and Shorthand.

ELIZABETH LEE WHITESCARVER, Instructor in Shorthand and Typewriting.

Other Instructors Giving Courses in this School.

ROBERT ALLEN ARMSTRONG, A.M., Professor of English.

THOMAS CLARK ATKESON, Ph.D., Dean of the College of Agriculture, and Professor of Agriculture.

OKEY JOHNSON, A.M., LL.B., Dean of the College of Law, and Professor of Constitutional, International and Corporation Law.

THOMAS CONDIT MILLER, A.M., Principal of the Preparatory School, and Professor of Pedagogy.

THOMAS EDWARD HODGES, A.M., Professor of Physics.

CHARLES HENRY PATTERSON, A.M., Professor of Rhetoric and Elocution.

SAMUEL B. BROWN, A.M., Professor of Geology and Mineralogy.

WILLIAM P. WILLEY, A.M., Professor of Commercial Law.

ALEXANDER REID WHITEHILL, Ph.D., Professor of Chemistry.

JAMES DAVID THOMPSON, A.M., M.S., Assistant Professor of Mathematics.

LLOYD LOWNDES FRIEND, A.M., Instructor in English.

WILLIAM EARL RUMSEY, B.S.Agr., Instructor in Botany.

The Commercial School.

This School was established in 1895, the object being to prepare young men and women for practical business life, and to give to

students in other departments of the University an opportunity to study the subjects taught in this School. Students in the College of Arts and Sciences, the College of Law, and the other departments of the University may take any of the work outlined in the Commercial School without additional fees.

The instruction in the Commercial course is given in connection with the work done by the professors in the other departments of the University, the curriculum being articulated with the other courses.

Students are permitted to make arrangements by which they can take special courses in Bookkeeping, Shorthand and Typewriting, thus preparing themselves to act as secretaries, amanuenses, assistants in business offices, court reporters, etc. The special advantages include a thorough course in English and an acquaintance with the routine work and technicalities of business.

A certificate will be granted to students who complete the courses and pass the required examinations and tests.

Fees.

Tuition is free to West Virginia students. To students from other States, the tuition in the Commercial School is $5.00 per quarter—twelve weeks.

The matriculation fee is $5.00, payable upon entering the University by all students. Unless a student remains out of school for more than three years the matriculation fee is paid but once by each student.

The contingent fee of $2.00, for each quarter, is payable at the beginning of the quarter.

A Typewriter fee of $1.00, payable at the beginning of each quarter, is charged each student for the use of the typewriter during the quarter.

The total University charge during the first quarter for students from West Virginia in the Commercial School amounts to $7.00, and each succeeding quarter $2.00. State cadets are furnished with books, stationery and uniforms free, and are not required to pay any fees.

Requirements for Admission.

The requirements for admission are as follows:

1. History:
   (a) General History,—Myers, or an equivalent;
   (b) United States History,—Fiske, or an equivalent.
2. English:
   (a) Spelling, punctuation and paragraphing;
   (b) English Grammar completed, with ability to write good English;

(c) Reed & Kellogg's Grammar completed, or an equivalent.

3. **Mathematics:**

(a) Arithmetic completed,—Greenleaf's, or an equivalent;

(b) Algebra,—Milne's "High School Algebra," or an equivalent.

4. **Elementary Science:**

(a) Physical Geography;

(b) Human Anatomy and Physiology,—Cutter's, or an equivalent.

5. **Civil Government:**

Fiske's or an equivalent.

Requirements for the Two Years Commercial Course.

Chemistry,	1 course;
English,	6 courses;
Commercial Geography,	1 course;
Economics,	1 course;
Botany,	1 course;
Freehand Drawing,	1 course;
Bookkeeping,	2 courses;
Commercial Law,	3 courses;
Bank Accounting,	1 course;
Shorthand,	3 courses;
Typewriting,	2 courses;
History of Commerce,	1 course;
Physics,	1 course;
Geology,	1 course.
	25 courses.

Schedule of Studies.

FIRST YEAR.

HOUR.	SUMMER.	FALL.	WINTER.	SPRING.
8.00	Bookkeeping	Geology 1	Typewriting	Botany 2
9.00	Shorthand	Chemistry 1	Economics 2	Fr. Hd. Drawing
10.00	Penmanship	Prep. Eng. 7	Prep. Eng. 8	Prep. Eng. 9
11.00	Typewriting	Penmanship	Com. Geog.	Physics 1

SECOND YEAR.

8.00	Bookkeeping	Bookkeeping	Bookkeeping	Bank Accounting
9.00	Shorthand	Com. Law	Com. Law	Com. Law
10.00	Typewriting	Shorthand	Shorthand	Shorthand
11.00	Penmanship	Rhetoric 1	Rhetoric 2	Rhetoric 3

DEPARTMENTS OF INSTRUCTION.

The studies that are taught in this department are the only courses described here. See the announcements of the Preparatory School and the College of Arts and Sciences for a description of the culture courses.

Bookkeeping.

Mr. Willis.

1. **Business Practice.** This is an introductory course, consisting of business practice and extensive drills in the use of vouchers, files, and in journalizing, posting, etc. In the course the student familiarizes himself with all the elementary rules and fundamental principles of bookkeeping. The student, in doing this work, is engaged as a bill clerk, shipping clerk, warehouseman, secretary, and bookkeeper for a firm doing a general merchandising business.

Text-book, "Office Routine and Bookkeeping." Prerequisites, Penmanship, Commercial Arithmetic, or an equivalent.

Summer, Fall, Winter, and Spring, 8:00; 24 U.

2. **Office Work and Accounting.** This course is a continuation of Course 1, the student becoming a member of the firm, and general manager and bookkeeper. There are frequent drills in making inventories of the property and resources and liabilities, financial statements, balances and balance sheets, etc. The student is required to write all articles of agreement, deeds, mortgages, bills of sale, etc. The adjustment of losses and the settlements with insurance companies after a fire is a special feature of this course. Changing the firm and the kind of business, etc., and changing from double to single entry bookkeeping. Text-book, "Office Routine and Bookkeeping." Summer, Fall, Winter, and Spring, 8:00; 24 U.

3. **Special Accounting.** A theoretical course in keeping the accounts in special lines of business, as lumber, shipments and consignments, commission and shipping, jobbing, installments, railroad bookkeeping, etc. This is an advanced course which is not required in the regular Commercial Course. Text-book, "Advanced Bookkeeping," Williams & Rogers. Prerequisites, Bookkeeping 1 and 2. Summer, Fall, Winter, and Spring, 8:00; 24 U.

4. **Bank Accounting.** A complete course in bank accounting and practice, consisting of working in the bank as teller, bookkeeper, etc.; and the theoretical work as outlined in the text. This is the system that is universally used in the banks of this country and approved by the National Bankers' Association. Prerequisites, Bookkeeping 1 and 2. "New Banking," Williams & Rogers.

Fall, Winter, and Spring, 8:00; 24 U.

Shorthand.

Mr. Willis and Miss Whitescarver.

1. **Theory.** This course includes the basis and fundamental principles of the art. Special attention is given to accuracy in the execution of the consonants. Thorough drills are given in the use of vowels and vowel positions. Introduction of word signs and special phrasing from day to day, and cumulative principles, modifications of consonants and affixes, as outlined in Dement's "Pitmanic Shorthand," to page 88.
Summer, 9:00; Fall, 9:00; Winter, 10:00; and Spring, 11:00; 24 U.

2. **Cumulative Phrasing.** This course is a continuation of Course 1. Cumulative principles and affixes are introduced in their natural order. Following this, cumulative phrasing, which consists in the indication of the omission of words by special use of the principles given in Course 1. Special contractions and special phrasing, etc. This work will be presented in the order given in Dement's "Pitmanic Shorthand," pages 88 to 232.
Fall, 11:00; Winter, 9:00; Spring, 10:00; 24 U.

3. **Speed Practice and General Dictation.** Letter writing, speed practice, and writing after general dictation. Writing testimony and argument will be a special feature in the course. Special attention is given to each individual student in this course in order to prevent speed practice from destroying accuracy of notes, etc. Most of the dictation and reading exercises are to be found in Dement's "Dictators," Nos. 1, 2, 3, 4. Fall, 10:00; Winter, 11:00; Spring, 9:00; 24 U.

4. **Court Reporting.** This is a special course in court reporting given to students who have completed Courses 1, 2, and 3. This work is given in connection with the moot courts in the College of Law. The student is appointed court stenographer by the judge of the court, and reports the cases tried in that court and in the justices' courts of the same department. Duplicate reports are submitted for inspection. This gives the student actual practice in court reporting, as required by the West Virginia law. In addition to this actual practice daily drills are given to acquire speed in writing and transcribing testimony, etc. Brown's "Court Reporting" is used as a text-book. Summer, Winter, and Spring, 2:00 to 4:00.

Penmanship.

Mr. Willis.

1. **Penmanship.** This is a course in plain business writing. Students are required to eliminate all unnecessary flourishes and to reduce their writing to a rapid, plain and abbreviated style of penmanship. They are permitted to use either the vertical or slant

writing. The modern and improved methods of instruction are used, with Palmer's "Penmanship Budget" as a guide.

Fall and Winter; 24 U.

Typewriting.

Miss Whitescarver.

1. **Typewriting.** The "Smith Premier" machine is used for instruction and practice. The instruction includes thorough drills on the various exercises outlined in the text. This furnishes the student with a knowledge of the mechanism of the machine, which is essential in its adjustment. Text-book, Gaylord's "Typewriting."

Summer, Fall, Winter, and Spring, 8 to 12, and 2 to 4; 23 U.

2. **Transcribing.** Students of Shorthand are required to take this course in connection with Course 3 in Shorthand. This work consists of constant practice in writing from shorthand notes, and the use of the various duplicating apparatus, etc. No text is used.

Summer, Fall, Winter, and Spring, 8:00 A. M. till 4:00 P. M.

Commercial Law.

Dean Johnson and Professor Willey.

1. **Contracts.** The object of this course is to group, set in order and illustrate the entire elementary doctrine of the law of contracts in such a manner as to render obvious their application in practice. This course is given by lectures, with assigned readings from a prescribed text-book, and law reports.

Professor Willey. Fall, 9:00; 14 U.

2. **Negotiable Paper.** This course deals with the law of negotiable paper, beginning with the origin of negotiability, and showing the mode and practice of Law Merchant, and the effect the various statutes have had upon them. The mode of instruction is by lectures, being the same lectures taken by students of the LL.B. course, and by assigned cases to be read as authority.

Professor Willey. Half course. Winter, 9:00; 14 U.

3. **Bailments and Suretyship.** The work in the course embraces the law of bailments, which to-day is the great factor in commerce, and the law of guaranty and suretyship, and the law of insurance. Instruction is given by lectures, quizzes and assigned readings.

Professor Willey. Half course. Winter, 9:00; 14 U.

4. **Agency.** This is a course in the law of agency. The course covers the principles that govern the relations of principal and agent, and of their authority, and what constitutes revocation, etc. Instruction is given by lectures, quizzes and assigned cases to be read. Dean Johnson. Half course. Spring, 9:00; 11 U.

Commercial Geography and History.

Professor Atkeson.

1. **Commercial Geography.** A description of the surface of the earth, with special reference to the production, manufacture, transportation, and exchange of articles of trade. A general outline of the countries of the world, soil, climate, agricultural products, forests, manufactories, quarries, mines, centers of industry, foreign relations, ways of communication, social relations and conditions, imports, exports, and markets. Special attention is given to the study of the United States, area, climate, position, population, natural resources, raw products, manufactures, waterways, railways, seaports, exports, imports, reasons for rapid growth of Western cities, industrial possibilities. Text-book, Chisholm's "Smaller Commercial Geography." Half course. Fall, 10:00; Winter, 11:00; A.

2. **History of Commerce.** History of Commerce; methods of exchange in ancient times; shipping of the ancients; fairs and markets; results of maritime discoveries; changing the commercial routes; international treaties affecting commerce; scientific and industrial discoveries affecting commerce; trade restrictions; consuls and modern commerce; boards of trade; stock and produce exchanges; modern transportation; freight express companies; insurance; modern modes of preparing and shipping articles of merchandise; circulation of commodities between cities and countries; trade statistics; dependence of manufactures upon producers of raw material; nomenclature of commerce. Text-book, Gilbert's "History and Principles of Commerce."

Fall, 10:00; Winter, 11:00; A.

THE PREPARATORY SCHOOLS.

The Preparatory School at Morgantown.

STAFF OF INSTRUCTION.

The Faculty.

JEROME HALL RAYMOND, Ph.D., President.

THOMAS CONDIT MILLER, A.M., Principal, and Professor of Pedagogy.

ALFRED JARRETT HARE, A.B., Professor of the Latin Language and Literature.

JAMES MADISON BURNS, Major U. S. Army, Professor of Military Science and Tactics, and Commandant of Cadets.

LLOYD LOWNDES FRIEND, A.B., Instructor in English.

DANIEL WEBSTER OHERN, A.M., Assistant in Greek.

THOMAS CARSKADON JOHNSON, B.S.Agr., Fellow in Mathematics.

BERNARD CAMILLUS BONDURANT, A.M., Fellow in Latin.

Other Instructors Giving Courses in this School.

SAMUEL B. BROWN, A.M., Professor of Geology and Mineralogy.

THOMAS EDWARD HODGES, A.M., Professor of Physics.

LEWIS CASS WOOLERY, A.M., Professor of the Greek Language and Literature.

RICHARD ELLSWORTH FAST, LL.B., A.M., Professor of American History and Political Science.

FREDERICK WILSON TRUSCOTT, Ph.D., Professor of Germanic Languages and Literatures.

KENNETH McKENZIE, Ph.D., Professor of Romance Languages and Literatures.

EVA EMMA HUBBARD, Instructor in Drawing.

Purpose.

The Preparatory School is maintained to fit young men and young women for the various courses of the University, and it offers excellent opportunities for both mental and moral development under helpful guidance. Those who have not the advantages of an academy or good high school near home may here receive instruction in any of the common branches. Many of the young men in this school are enrolled in the Cadet Corps, and the habits of neatness, accuracy, and mental and bodily discipline inculcated therein are an invaluable part of a young man's training.

Students who are deficient in only one or two branches of this School may, while finishing this work, take some College studies. But all of the required work of the Preparatory course must be completed before a student is permitted to go on regularly into any University course. Those who do not expect to take a course in the University will be given such studies in the Preparatory School as they are able to pursue profitably.

Admission.

For admission to this School applicants must be at least fifteen years of age, and they should present a certificate of scholarship from their last instructor or the last school with which they were connected. They should be proficient in the ordinary course of study pursued in the public schools of the state, and especially in English grammar and arithmetic. No regular examination is required for admission to the classes of the first year, the student being admitted on trial; if he is not able to pursue the course successfully, he is required to withdraw. Students desiring to take the studies of the second, third or fourth Preparatory year will be examined as to their ability to enter the classes of that year, unless they otherwise satisfy the Principal that they are qualified for entrance.

Promotion.

No student will be permitted to enter any higher class or section until he shall have passed in the lower, or shown by special examination that he is able to go on satisfactorily.

Advanced Standing.

The work in this School is so arranged as to enable students to take the course in the shortest time consistent with the attainment of the required proficiency. Students who, upon entering, can take advanced standing, and who are capable of making good progress, may finish the course in one year. When they do not lack much of

the course, they may even finish it in one or two quarters. Students who must take the course from the beginning, and who cannot make rapid progress, will find it necessary to give three years, or even more, to the work of this School. In order that a student may complete the mathematics of this School in two years, he must be well along in arithmetic and possess considerable knowledge of algebra.

Co-education.

Young men and young women are admitted on equal terms.

Preparatory Schedules.

Two schedules have been arranged for the Preparatory work:

(1) A four years schedule for those who find it necessary to take all the work in the Preparatory School, and who are not able to carry more than three studies during the first three years of the course.

(2) A three years schedule for those who have satisfactorily passed in Physiology, United States History, and Arithmetic, before entering the Preparatory School, and who are able to carry four studies throughout the three years.

I. Schedule Arranged for Four Years.

FIRST YEAR.

HOUR.	FALL.	WINTER.	SPRING.
8:00	English 1	English 2	English 3
9:00	Arithmetic	American History	Physiology
10:00	Physical Geog.	Botany 1	Botany 2

SECOND YEAR.

8:00	Greek History	Roman History	Algebra 1
10:00	English 4	English 5	English 6
11:00	Latin 1, or French 1	Latin 2, or French 2	Latin 3, or French 3

THIRD YEAR.

8:00	Algebra 2	Algebra 3	Plane Geometry 1
9:00	Greek 1, or German 1	Greek 2, or German 2	Greek 3, or German 3
11:00	Latin 5, or French 4, or English 7	Latin 6, or French 5, or English 8	Latin 7, or French 6, or English 9

FOURTH YEAR.

8:00	Greek 5, or German 4	Greek 6, or German 5	Greek 7, or German 6
9:00	Latin 9, or Drawing 1, or Chemistry 1	Latin 10, or Drawing 2, or Chemistry 2	Latin 11, or Drawing 3, or Chemistry 3, or Plane Trigonometry
10:00	English 7, or Zoölogy 1	English 8, or Zoölogy 2	English 9, or Zoölogy 3 and 4, or Astronomy
11:00	Plane Geometry 2	Physics 1, or Solid Geometry	Physics 2, or Plane Trigonometry

II. Schedule Arranged for Three Years.

FIRST YEAR.

HOUR.	FALL.	WINTER.	SPRING.
8:00	Greek History	Roman History	Algebra 1
9:00	English 1	English 2	English 3
10:00	Physical Geog.	Botany 1	Botany 2
11:00	Latin 1, or French 1	Latin 2, or French 2	Latin 3, or French 3

SECOND YEAR.

8:00	Algebra 2	Algebra 3	Plane Geometry 1
9:00	Greek 1, or German 1, or Drawing 1	Greek 2, or German 2, or Drawing 2	Greek 3, or German 3, or Drawing 3
10:00	Latin 4, or French 4	Latin 5, or French 5	Latin 6, or French 6
11:00	English 4	English 5	English 6

THIRD YEAR.

8:00	Greek 4, or German 4	Greek 5, or German 5	Greek 6, or German 6
9:00	Latin 7, or Drawing 1, or Chemistry 1	Latin 8, or Drawing 2, or Chemistry 2	Latin 9, or Drawing 3, or Chemistry 3, or Plane Trigonometry
10:00	English 7, or Zoölogy 1	English 8, or Zoölogy 2	English 9, or Zoölogy 3 and 4, or Astronomy
11:00	Plane Geometry 2	Physics 1, or Solid Geometry	Physics 2, or Plane Trigonometry

DEPARTMENTS OF INSTRUCTION.

English.

Professor Miller and Mr. Friend.

FIRST YEAR.

1. Harvey's Grammar, with careful drill in orthography, punctuation, etc. Fall, first section, 8:00; second section, 9:00; 10 M.

2. Whitney's "Essentials of Grammar."
Winter, first section, 8:00; second section, 9:00; 10 M.

3. Reed and Kellogg's "Higher Lessons in English" to Lesson 112, with oral analysis and especial attention to synthetic exercises.
Spring, first section, 8:00; second section, 9:00; 10 M.

SECOND YEAR.

4. Reed and Kellogg's "Higher Lessons in English," completed, with drill in composition.
Summer, 9:00; Fall, first section, 10:00; second section, 11:00; 10 M.

5. Buehler's Practical Lessons in English, with critiques and reviews. Careful reading, with analysis and word study, of one of the English classics required for entrance to college.
Winter, first section, 10:00; second section, 11:00; 10 M.

6. Hill's "Elements of Rhetoric" to Chapter V, with one of the English classics as in Course 5.
Spring, first section, 10:00; second section, 11:00; 10 M.

THIRD YEAR.

7. Hill's "Elements of Rhetoric," completed, with continued drill in composition and one of the English classics as in Course 5.
Summer, Fall, 10:00; 23 S.

8. Irish's "Introduction to American Literature," with careful reading of some of the English classics required for entrance to College. In this and the following course the classics are read chronologically with a study of each author among his contemporaries, and as the representative of his period in literature and history.
Winter, 10:00; 23 S.

9. English literature, including reviews and reading of the classics as in Course 8, continued. Spring, 10:00; 23 S.

Latin.

Professor Hare and Mr. Bondurant.

FIRST YEAR.

1. Etymology. Chase and Stuart's "First Year in Latin," pages 9-125. Summer, 11:00; Fall, 11:00; Winter, 8:00; Spring, 9:00; 11 M.

2. Syntax. Chase and Stuart's "First Year in Latin," pages 126-200. Summer, 8:00; Fall, 8:00; Winter, 11:00; Spring, 9:00; 11 M.

3. **Oratio Obliqua, and Caesar (Book I, chs. 1-29).** Chase and Stuart's "First Year in Latin," completed.

Summer, 2:00; Fall, 8:00; Winter, 9:00; Spring, 11:00; 11 M.

4. **Eutropius (Books I-V).** This course is for students who have completed Courses 1, 2, and 3, or their equivalent.

Summer, 10:00; 11 M.

SECOND YEAR.

5. **Caesar's Gallic War (Books I and II).**

Summer, 10:00; Fall, 10:00; Winter, 9:00; Spring, 8:00; 11 M.

6. **Caesar's Gallic War (Books III and IV).**

Winter, 10:00; 11 M.

7. **Cicero's First and Second Orations Against Catiline.**

Spring, 10:00; 11 M.

8. **Cornelius Nepos.** For students who have had five courses or their equivalent. Summer, 9:00; 11 M.

THIRD YEAR.

9. **Cicero's Third and Fourth Orations against Catiline, and the Oration for Archias.** Summer, 9:00; Fall, 9:00; 11 M.

10. **Virgil's Aeneid (Books I, II, and III).** Winter, 9:00; 11 M.

11. **Virgil's Aeneid (Books IV, V, and VI).** Spring, 9:00; 11 M.

Allen and Greenough's "Grammar," Revised Edition, is used in Courses 4-11.

Courses 4 and 8 are given only during the summer quarter.

Greek.

Professor Woolery and Mr. Ohern.

1. **White's First Greek Book (Chapters I-XL).** This course is for beginners. The work covers pronunciation, accent, declensions and conjugations, etymology of words, and simple translations from Greek into English and from English into Greek to illustrate the principles of grammar as given in the text.

Summer, 8:00; Fall, 9:00; Spring, 8:00; 8 M.

2. **First Greek Book (Completed).** This is a continuation of Course 1. Prerequisite, Greek 1.

Summer, 9:00; Fall, 9:00; Winter, 9:00; 8 M.

3. **Xenophon's Anabasis (Book I).** Study of connected discourse and syntax. Prose composition once a week. Texts, Goodwin and White's "Xenophon's Anabasis;" Goodwin's "Greek Grammar;" Pearson's "Greek Prose Composition." Prerequisites, Greek 1 and 2.

Fall, 11:00; Winter, 10:00; Spring, 9:00; 8 M.

4. **Xenophon's Hellenica.** This is an independent course especially for Summer Quarter students. Greek Composition once a week. Manatt's "Xenophon's Hellenica;" Goodwin's Greek Gram-

mar; Pearson's "Greek Prose Composition." Prerequsites, Greek 1, 2, and 3. Summer, 10:00; 8 M.

5. **Xenophon's Anabasis (Books II, III, and IV).** Prose Composition once a week. A study in forms of Greek narrative. A fuller knowledge of the grammar is required. Prerequisites, Greek 1, 2, and 3. Goodwin's "Xenophon's Anabasis;" Goodwin's Greek Grammar; Pearson's "Greek Prose Composition."
Fall, 8:00; Winter, 11:00; Spring, 10:00; 8 M.

6. **Lysias' Orations.** Prose composition once a week. A study of the form of Greek orations and Lysias' style. Collateral library work assigned to each student. Prerequisites, Greek 1, 2, 3, and 5, or their equivalent. Winter, 8:00; Spring, 11:00; 8 M.

7. **Homer's Iliad or Odyssey (Books I, II, and III) and Homeric Verse.** All the text is read metrically, and passages are memorized. Etymology, Mythology, and Prosody receive special attention. Seymour's "Iliad." Collateral reading: Jebb's "Introduction to Homer," Gladstone's "Time and Place of Homer." Prerequisites, Greek 1, 2, 3, 5, 6. Spring, 8:00; 8 M.

Note.—Six courses constitute the preparatory requirements in Greek. Students who take the seven courses will receive credit for one course in College.

French.

Professor McKenzie and Mr. Ballard.

1. **Elementary Course.** Grammar, reading, and as much practice as possible in pronunciation and conversation. Whitney's or Edgren's Grammar; Super's or Whitney's Reader. Summer, 11:00; Fall, first section, 11:00; second section, 12:00; Spring, 9:00; 10 U.

2. **Elementary Course.** A continuation of Course 2. The Grammar and the Reader will be finished, and the reading of easy French texts continued. Summer, 9:00;
Winter, first section, 11:00; second section, 12:00; 10 U.

3. **Modern Prose.** A continuation of Course 2. Reading from works by Erckmann-Chatrian, Enault, George Sand, etc.; Grandgent's "Materials for French Composition." It is expected that in Courses 1, 2, and 3 the elements of French grammar will be mastered, a fair pronunciation acquired, and 450 to 500 pages of modern prose and poetry read. Spring, first section, 11:00; second section, 12:00; 10 U.

4. **Fiction of the Nineteenth Century.** Works of Daudet, Dumas, About, etc.; La Fontaine's Fables. Practice in writing and speaking French, continued through Courses 5 and 6. For students who have had one year of French. Summer, Fall, 10:00; 10 U.

5. **Historical and Dramatic Works of the Nineteenth Century.** Works of Michelet, Paileron, Dumas, Scribe, Victor Hugo.
Winter, 10:00; 10 U.

6. **Dramas of the Seventeenth Century.** Corneille, Racine, Molière. Spring, 10:00; 10 U.

German.

Professor Truscott, Dr. Carr and Mr. Porterfield.

1. **Elementary German.** A course for beginners, the object being to acquaint the student with the elements of grammar, to give him a reading knowledge of the easiest German prose, and as much practice in pronunciation as possible. Thomas' Grammar, Part I; Harris' Reader, Part I. Summer, 9:00;
Fall, first section, 9:00; second section, 11:00; third section, 12:00;
Winter, 12; 22 U.

2. **Elementary German.** A continuation of Course 1. Reading of easy prose and poetry. Some poems will be memorized and especial attention given to correct pronunciation. Reading at sight. Harris' Reader, Parts II, IV, and VI.
Winter, first section, 9:00; second section, 11:00;
Spring, 12:00; 22 U.

3. **Elementary German.** A continuation of Course 2. Reading and conversation. Elementary work on composition accompanied by a review of the Grammar. "Immensee." "Höher als die Kirche." "Im Zwielicht." Hatfield's "Materials for Composition."
Spring, first section, 9:00; second section, 11:00; 22 U.

4. **German Prose.** Copious reading cf German prose to render the student familiar with the idioms of the language and give him a large and varied vocabulary. Nichol's "Three German Tales," Bernhardt's "Novelleten-Bibliothek." Summer, Fall, 8:00; 22 U.

5. **Composition and Conversation.** Practice in writing German and translation of English prose into idiomatic German. A part of the time will be devoted to exercises in conversation. "Methode Berlitz, Erstes Buch." Harris' "Prose Composition."
Winter, 8:00; 22 U.

6. **German Poetry.** "Hermann und Dorothea." Familiar German ballads. Spring, 8:00; 22 U.

History.

Professor Fast and Associate Professor Daniels.

1. **History of Greece.** An outline study of Greek history with special reference to the development and peculiar characteristics of Greek civilization. Fall, 8:00; 4 M.

2. **History of Rome.** An outline study of Roman history from the founding of Rome to 476 A. D. Winter, 8:00; 4 M.

3. **History of the Middle Ages.** In this course, the history of the period between ancient and modern times will be broadly sketched, and a study made of the institutions peculiar to the middle ages. Spring, 1901, 9:00; 4 M.

4. **Modern European History.** This course will trace the history of Europe in the last four centuries, special attention being given to the period of religious reformation, and to the series of revolutions which have established the present state systems. Spring, 1902, 9:00; 4 M.

Courses 1, 2, 3 and 4 are intended to give a general view of European history, and are recommended to all students planning to take college courses in history.

5. **History of England.** This course will outline the history of England from the Teutonic settlement to the present time. It is intended chiefly as an introduction to the college courses in English history, but it will serve also to give a general view of the subject to students not planning to take the advanced work. Fall.

6. **Outlines of United States History.** A general course of narrative and political history required for admission to all other courses in United States history. Fiske's "History of the United States." Winter, 9:00; 6 M.

Mathematics.

Assistant Professor Thompson, Mr. Willis and Mr. Johnson.

Arithmetic.

1. **Arithmetic.** A review of the higher Arithmetic with particular attention to the application of Percentage, Mensuration, and the Metric System. Beeman and Smith's "High School Arithmetic." Mr. Willis. Summer, Fall, Winter, Spring, 9:00; 23 U.

Algebra.

1. **Algebra, up to and including Simple Equations.** Charles Smith's "Elementary Algebra." Fall, 8:00; Winter, 11:00; Spring, 9:00.

2. **Algebra, up to and including Quadratics.** Charles Smith's "Elementary Algebra." Fall, 8:00; Winter, 8:00; Spring, 11:00.

3. **Algebra, including Progressions and Logarithms.** Charles Smith's "Elementary Algebra." Winter, 8:00; Spring, 11:00.

4. **Algebra, including Permutations and Combinations, Binomial Theorem, Exponential and Logarithmic and other Series.** Fall, 11:00; Winter, 10:00; 3 M.

Plane Geometry.

1. **Plane Geometry.** The first two books. Wentworth's "Plane Geometry." Fall, 9:00; Spring, 8:00; 7 M.

2. **Plane Geometry.** Completed. Wentworth's "Plane Geometry." Fall, 11:00; Winter, 9:00.

3. **Solid Geometry.** Wentworth's "Solid Geometry." Fall, 10:00; Winter, 11:00; 3 M.

Trigonometry.

1. **Plane Trigonometry.** Wells' "Revised Trigonometry." Professor Stewart. Fall, 10:00; Spring, 9:00, 11:00; 3 M.

Binomial Theorem, Undetermined Coefficients and Summation of Summer, Fall, 9:00; Winter, 8:00; Spring, 9:00; 7 M.

Botany.

Professor Copeland.

1. **Elementary Laboratory Botany.** This is very largely a laboratory course, with dissecting and compound microscopes, and including some simple experiments. A text book will be used only for a general guide. Fall, Winter, 10:00; 30 U.

2. **Elementary Field Botany.** This course is chiefly outdoor work, and will include practice in the determination of vascular plants. Spring, Summer, 10:00; 30 U.

Courses 1 and 2 may both be presented for entrance credit in Botany. Either may precede the other, but they should be taken in successive quarters.

Physiology.

Professor Hartigan.

An elementary course for first year students. Winter, 9:00; 30 U.

Physics.

Professor Hodges.

1. **Physics.** An elementary course for third or fourth year students. Recitations, supplemented by experiments and demonstrations. Prerequisites, Elementary Algebra and Plane Geometry. Gage's "Elements of Physics." Summer, 10:00; Winter, Spring, 11:00; 11 S.

2. **Elementary Physics.** Electricity and Magnetism. Sound and Light. Continuation of Course 1. Spring, 11:30; 11 S.

Courses 1 and 2 will satisfy the entrance requirements in Physics. Students in the College who have not presented work in Physics among their entrance requirements, may receive college credit for these courses.

Physical Geography.

Professor Brown.

An elementary course for first year students. Fall 9:00; 30 S.

THE PREPARATORY SCHOOL AT MONTGOMERY.

JEROME HALL RAYMOND, Ph.D., President.
JOSIAH KEELY, A.B., Principal.
RUBY RAY KNIGHT, B.S., Assistant.
ALTHA WARMAN, A.B., Assistant.

General Information.

The Preparatory School of the West Virginia University at Montgomery in Fayette county was established under the provisions of an act of the Legislature passed February 16, 1895. A suitable building was erected on a beautiful site overlooking the town of Montgomery, the Kanawha river and the Chesapeake and Ohio Railroad, and the School was opened the first Monday in January, 1897.

The control of the School is vested in the Board of Regents of the West Virginia University and the State Superintendent of Free Schools.

The President of the University is ex officio President of this School.

The course of study and the length of quarters are the same as in the Preparatory School at Morgantown (see pages 182-192).

Tuition is free to all young men and young women of West Virginia.

The citizens of Montgomery donated the spacious and beautiful grounds for the School, and they are enthusiastic workers for its welfare. The last Legislature made liberal appropriations for this School.

It is expected that all who enter the University Preparatory School at Montgomery will make every possible effort to go on from there to the University.

The school is easy of access from the counties of Fayette, Raleigh, Summers, Greenbrier, Nicholas, Clay, Kanawha, Boone, Mercer, Monroe, Wyoming, and the entire southern section of the state.

A dormitory has been erected, which furnishes excellent lodging-rooms and board. It is under the control of the Principal of the School.

The School building is well furnished, and has a good working library. The work is of the most thorough and careful character.

For information concerning the School, application should be made to the Principal.

THE MILITARY DEPARTMENT.

JAMES M. BURNS, Major U. S. A., Commandant of Cadets and Professor of Military Science and Tactics.

Extract from Militia Law, State of West Virginia, 1897, sec. 100: "The Corps of Cadets of the West Virginia University shall be held as a part of the West Virginia National Guard, subject to such duty as the Commander-in-chief may order."

State cadets, to the number of 144, are appointed by the Regents of the University, and receive their uniforms, books, stationery, tuition, use of library, use of arms and equipments, and ammunition for target practice free. No charge is made for their admission. They constitute the public guard of the University and of the public property belonging thereto. In order to receive an appointment as state cadet a candidate must be between sixteen and twenty-one years of age, and must furnish evidence of good moral character. Application for a cadet appointment should be made to one of the Regents of the University. (See "Board of Regents," page 9). State cadets' term of enlistment is two years.

Students of the University who desire military instruction, and who are not state cadets, are allowed to join the corps as volunteer cadets. They receive no uniform from the state.

All cadets are required to wear a neat-appearing gray uniform at drill. Their uniform may be worn with propriety on all occasions.

Officers of the regular army are specially detailed by the President of the United States, one to act as Commandant of Cadets, and one to make an annual inspection of the Corps.

Special Rewards for Military Excellence.

The names of the three most distinguished cadets are published annually in the official U. S. Army Register.

Gold and silver medals are awarded annually to cadets for special excellence.

Cadets who are recommended for promotion after completing examination receive commissions as officers, signed by the Governor of the state, and such commission entitles them to rank with other officers of the National Guard of West Virginia, according to grade and date of commission.

Administration and Instruction.

For the purpose of administration and drill the Corps of Cadets

is organized as an infantry battalion. There is also an artillery detachment. Infractions of discipline are referred to a court-martial, consisting of cadet officers, for investigation. Cadets are divided into sections corresponding to their military proficiency and length of service. New cadets are required to enter the fourth (lowest) section, but those who have had previous military instruction may be transferred to a higher section upon passing a satisfactory examination.

The course of military instruction, practical and theoretical, is intended to fit all who graduate to perform efficiently the duties of officers in the National Guard of West Virginia. In addition to this, all cadets are taught that patriotism, punctuality, obedience, attention, alertness, and neatness are at all times expected of them. It is believed that the training a cadet receives fits him to become a good citizen as well as a good soldier. The qualities which go toward making the good officer are no less valuable, when considered in connection with the business man, professional man, or farmer. They are the qualities which ordinarily insure success in every walk of life. The excellent physical results which follow systematic military drill are well known and acknowledged by all competent judges.

DEPARTMENT OF PHYSICAL TRAINING.

BENJAMIN GRAEFF PRINTZ, Director of the Gymnasium, and Instructor in Physical Training.

The Gymnasium.

The Gymnasium occupies the entire first floor of Commencement Hall. It is large and well ventilated, has good light, is properly heated in winter, and is equipped with the most modern and approved apparatus, and with plunge and shower baths. It is open for the use of students every day except Sunday. Certain hours are reserved for lady students. Separate classes in Gymnastics are formed for men and women, and in addition to these classes private work is arranged for individual students. All students are encouraged to utilize the Gymnasium in every possible way.

Course in Physical Training.

As the fundamental work in Physical Training is general body building, no definitely prescribed course can be arranged.

Each student will be measured, and then assigned special work to suit his individual needs. This special work will be supplemented by class work, consisting of exercises of club swinging (with music, if desired), dumb-bells, apparatus work, with horse, horizontal bar, parallel bars, etc.

Games, such as basket ball and indoor base ball, are provided for.

Each class meets three hours per week. The days and hours for the meeting of the classes will be arranged at the beginning of each quarter.

Beginning with the fall quarter a regulation suit will be required. This suit will consist of gray Turner pants, blue knit sleeveless shirt or jersey, and shoes with rubber or buck soles.

The regular course in Physical Training occupies two years, and is required of all young men in the Preparatory School, and of all members of the Cadet Corps. Students may be excused by their class officers for sufficient reasons.

The instruction is by lectures and class exercises. The time devoted to it is three hours per week throughout the two years. The class for men meets Tuesdays and Thursdays at 4 P. M., and Saturdays at 9 A. M. For women students the work in Physical Training is elective. The class for women meets Mondays, Wednesdays and Fridays at 4 P. M.

First Year.

The fall quarter is given to light gymnastics. The students are drilled to music in the simple motions of stepping, charging, lunging, hopping, running, etc. The winter is given to other free gymnastic movements, including the various head, neck, eye, chest, waist and extremity exercises, and basket ball work. During the spring quarter the time is given to instruction in calisthenics, figure marching, running and light dumb-bell exercises.

Second Year.

During the fall quarter the light dumb-bell exercises are continued with exercises in vaulting, jumping, and club swinging. The winter quarter is devoted to club swinging, chest-machine work, ladder and bar-bell exercises, and the spring quarter to horizontal and parallel bar work, fencing, boxing, and ring exercises.

Credit for Work in Physical Training.

College students who take the work in Physical Training, whether as required or elective work, will receive for each quarter's work in Physical Training credit for one-third of a course toward any degree in the College of Arts and Sciences, or in the College of Agriculture.

INSTRUCTION BY CORRESPONDENCE.

The University is now giving instruction by correspondence to students at a distance.

It should be clearly understood that instruction by correspondence is by no means regarded as the equivalent of resident study. Experience has shown, however, that earnest students may do good work at a distance from the University when guided by competent instruction by correspondence. There are in every locality teachers, ministers, and men and women of various vocations, who are carrying on the study of certain subjects alone, and who would be glad to avail themselves of the guidance of a University instructor. There are others who would take up and prosecute some line of study if they could have competent guidance, but who do not feel able to carry on any study without assistance. Some are looking forward to a college course, and would like to prepare themselves for admission; others would like to do a part of the college work in absence, thereby shortening the time of residence required for a degree. For these various classes of persons and all others who desire to receive guidance in some line of study by correspondence, whether with a view to receiving University credit or not, the West Virginia University offers instruction by correspondence according to the following plan:

Methods of Instruction by Correspondence.

The courses offered by corespondence are arranged to cover the same ground as the corresponding courses in the University proper. The University year is divided into four quarters. The average requirement for students doing full work at the University is fifteen hours of recitations weekly, i. e., the equivalent of three full courses each quarter. A full course consists of five recitations a week for one quarter (twelve weeks). Most courses in the University are full courses, though some are half-courses, and a very few are one-third courses. Unless otherwise noted, all courses offered by correspondence are full courses, each one being equivalent to a study in the University proper running through one quarter, the class meeting five times a week.

Instruction by correspondence is carried on by a series of printed instruction and question sheets. In the case of a full course,

the entire course consists of twenty of these instruction sheets. Each sheet assigns the student certain work, gives suggestions and explanations and a series of questions, the answers to which the student is to write out after having performed the work assigned. The answers to these questions the student is to mail to the University with any questions or difficulties which have arisen in his mind. As soon as possible after this recitation paper has been received at the University it will be returned with errors corrected and whatever suggestions the instructor may think necessary.

Only a few of the courses offered at the University are as yet offered by correspondence. Below is given a list of courses which may be taken by correspondence; of these courses not more than two may be taken by one student at the same time. The student must complete any course chosen within a year from the time he begins it; he may complete it as soon after beginning it as he is able.

Students may begin any course at any time.

If a period of sixty days elapses without any report from a correspondence student he will be deemed to have dropped the course, and he will forfeit his right to further instruction.

University Credit for Work Done by Correspondence.

1. When a student has completed any course of study by correspondence satisfactorily to the instructor, he will be given a certificate for the work done.

2. If he desires his work to be credited on the books of the University towards a degree, he must pass a special examination at the University on the work done by correspondence for which he wishes credit. In rare and exceptional cases this special examination may be conducted at the student's home by some one from the University or authorized by the University.

3. For the Bachelor's degree not more than one-half the required work may be performed by correspondence.

4. For the Master's degree not more than one-third of the required work may be performed by correspondence.

The University grants no degrees for work done entirely by correspondence or in absence.

For the degree of B.A. at least one year of resident study is required.

For the degree of M.A. at least two quarters of resident study is required, after receiving the Bachelor's degree.

Expenses.

The instruction fees are as follows:

For a full course	$5.00
For a half course	3.00
For a one-third course	2.00

These fees include the payment for printed lesson sheets, but the student is required to enclose postage with each recitation paper for its return when corrected by the instructor.

All fees are payable in advance.

Students are not required to pass any examination before undertaking any of these courses by correspondence; they are simply required to fill out a blank which will be sent on application. After examining this blank when it has been filled out and returned to the University, the instructor will decide whether the student is able to carry the course selected.

COURSES OF INSTRUCTION BY CORRESPONDENCE.

All courses are full courses except in Law. In each department of study the courses offered are separately numbered, and the fee for each course numbered is $5.00.

Philosophy.

Professor Reynolds.

1. Comparative Religion.
2. Ethics.
3. History of Philosophy.
4. Psychology.

Pedagogy.

Professor Miller.

1. History of Education.
2. Methods and Principles of Instruction.
3. School Management and School Supervision.
4. Educational Psychology.

Sociology.

President Raymond.

1. Anthropology.
2. Ethnology.
3. Elements of Sociology.
4. Social Philosophy.

Economics.

President Raymond.

1. Historical Introduction to Economics.
2. The Principles of Economics.
3. History of Economic Thought.

Political Science.

Professor Fast.

1. Local Government.
2. Theory of Political Science.

European History.

Associate Professor Daniels.

1. Oriental and Greek History.
2. Rome and the Roman Empire.
3. Mediæval History.
4. English History to the Accession of the Tudors.
5. English History from the Accession of the Tudors to the Present Time.
6. Modern History.
7. The History of Our Own Times—the Last Century and a Half.

American History.

Professor Fast.

1. American History to the Revolution.
2. History of the United States.

Greek.

Professor Woolery.

1. First Greek Book (White), Lessons I-XL.
2. First Greek Book, completed.
3. Xenophon's Anabasis (Goodwin), Book I.
4. Xenophon's Anabasis, Books II-III, and Prose Composition (Jones), Lessons 1-20.
5. Lycias' Orations (Stevens), and Prose Composition, completed.
6. Homer's Iliad and Homeric Verse (Seymore), Books I, II, and III. Myths of Greece and Rome (Guerber).
7. Plato's Apology (Dyer). A Study of Greek Philosophy (Mitchell).
8. Demosthenes' Philippics I and II. Oratory by Cicero.
9. Sophocles' Antigone. Ancient Greek Literature (Murray).
10. I and II Corinthians (Westcott and Hort).
11. Acts of the Apostles, Chapters I-XIV.
12. Acts of the Apostles, Chapters XV-XXVIII.

Note.—The English works assigned on Mythology, Philosophy, Oratory, and Literature are to be read only. Collateral reading will be assigned also in connection with a critical study of the New Testament Greek.

Latin.

Professor Douthat.

1. Latin for Beginners; first quarter.
2. Latin for Beginners; second quarter.
3. Latin for Beginners; third quarter.

4. Cæsar: Gallic War—Selections.
5. Cicero: Selected Orations.
6. Virgil, Æneid—Selections.
7. Livy—Selections.
8. Horace—Selections.

Romance Languages and Literature.

Professor McKenzie.

1. French for Beginners.
2. Intermediate French.
3. Advanced French.
4. Italian.
5. Spanish.

German.

Professor Truscott.

1. Intermediate Course in German.
2. Elementary Course in Composition.
3. German Prose.
4. Advanced Course in Composition.
5. Survey of German Literature.
6. Schiller.
7. Heine.

Rhetoric.

Professor Patterson.

1. Rhetoric for Beginners.
2. Intermediate Rhetoric.
3. Advanced Rhetoric.

English Literature.

Professor Armstrong.

1. Introduction to English Literature.
2. General Survey of English Literature: First Period.
3. General Survey of English Literature: Second Period.
4. The American Poets.
5. The English Essayists: First Period.
6. The English Essayists: Second Period.
7. The English Novelists.
8. Shakespeare.
9. Browning.

Mathematics.

Professor Stewart.

1. Teachers' Course in Algebra.
2. Plane Geometry.
3. Plane Trigonometry.

Physics.

Professor Hodges.

1. Elementary Physics.
2. Elementary Laboratory Course for Teachers in secondary schools, and for others having access to simple apparatus.

Chemistry.

Professor Whitehill.

1. Experimental course designed as an introduction to the study of Chemistry.

Geology.

Professor Brown.

1. Economic Geology.

Civil Engineering.

Professor Johnston.

1. Beginners' Course in Land Surveying.
2. Coal Mining in West Virginia.
3. Elementary Mechanical Drawing.
4. Advanced Mechanical Drawing.

Mechanics and Applied Mathematics.

Professor Emory.

1. Elementary Mechanics.
2. Theoretical Mechanics, Course 1.
3. Theoretical Mechanics, Course 2.
4. Applied Mechanics.
5. Theoretical Hydraulics.
6. Power, Course 1.
7. Power, Course 2.
8. Power, Course 3.
9. Engineering Calculus.

Agriculture.

Professor Atkeson.

1. The Elements of Agriculture.
2. Domestic Animals.
3. Science of Agriculture.
4. Rural Economics.

Note.—An Agricultural Course in Home Reading will be given free, for which no credit will be given on a University course, but a certificate will be given on its completion, for which a small fee will be charged to pay cost of printing. A special cricular regarding this Home Reading Course may be had upon application. (See page 137).

Horticulture:

Professor Corbett.

1. The Elements of Horticulture.
2. Science of Horticulture.
3. Forestry.

Entomology.

Dr. Hopkins.

1. Entomology for Beginners.

Economic Botany.

Professor Rumsey.

1. Economic Botany.

Commercial.

Mr. Willis.

1. Stenography.
2. Bookkeeping.

Law.

The College of Law offers instruction by correspondence in any of the subjects taught in the Junior year of the two years course These subjects are:

Blackstone (3 courses).
Contracts (½ course).
Insurance (½ course).
Criminal Law (½ course).
Negotiable Paper (⅓ course).
Suretyship and Guaranty (⅓ course).
Bailments (⅓ course).
Criminal Procedure (1 course).
International Law (1 course).
Evidence (1 course).
Agency (½ course).

The following text-books, with prices annexed, are used:

Blackstone's Commentaries, Lewis' Edition ($9.00).
Clark on Contracts ($3.50).
Elliott on Insurance ($3.50).
Clark on Criminal Law ($3.50).
Clark on Criminal Procedure ($3.50).
Norton on Negotiable Paper ($3.50).
Hale on Bailments ($3.50).
Glenn's International Law ($3.50).
Underhill on Evidence ($5.00).
Huffcut on Agency ($2.50).

These books may be had at the West Virginia University by

sending the price to Professor William P. Willey and the name of the nearest express office.

Cases in the various state and federal reports are frequently cited for the purpose of illustrating and amplifying principles. Students who have access to these reports will find it helpful to study the cases cited.

STUDENTS.

Graduate Students.

Fellows.

Ballard, Charles Clear, Schenectady, N. Y.
A.B., Union College, 1899.
Fellow in Romance Languages.

Bondurant, Bernard Camillus, Bethany.
A.B., Hampden-Sidney College, 1891; A.M., Bethany College, 1898.
Fellow in Latin.

Holden, Charles Fenton, Clarksburg.
Ph.B., West Virginia University, 1899.
Fellow in English Literature.

Johnson, Thomas Carskadon, Morgantown.
B.S.Agr., West Virginia University, 1896.
Fellow in Mathematics.

Moreland, Eleanor Brown, Morgantown.
A.B., West Virginia University, 1898.
Fellow in Domestic Science.

Morris, Robert, Harrisville.
A.B., West Virginia University, 1899; LL.B., ibid., 1899.
Fellow in Economics.

Naret, William Frazier, Morgantown.
B.Agr., West Virginia University, 1898; B.S.Agr., ibid., 1899.
Fellow in Agriculture.

Porterfield, Allen Wilson, Morgantown.
A.B., West Virginia University, 1899.
Fellow in German.

Smith, Simeon Conant, Provincetown, Mass.
A.B., Tufts College, 1898.
Fellow in Rhetoric and Elocution.

Whitham, William Henry, Morgantown.
B.S., West Virginia University, 1899.
Fellow in Physics.

Other Graduate Students.

Arnett, Lonna Dennis, Opekiska.
B.S., West Virginia University, 1897.
Sociology.

Brand, Harvey, Morgantown.
A.B., West Virginia University, 1890.
Pedagogy.

Buck, Winona Lee Hawthorne, Morgantown.
A.B., University of Cincinnati, 1877.
German.

Dent, Carrie Louise, Grafton.
A.B., West Virginia University, January 2, 1900.
English.

Eddy, Alexander Lough, Cross Roads.
A.B., West Virginia University, 1899.
Chemistry.

Ford, Nile Otis, Wheeling.
A.B., Washington and Jefferson College, 1897.
Civil Engineering.

Friend, Lloyd Lowndes, Morgantown.
A.B., West Virginia University, 1897.
English.

Goodwin, Elmer Forrest, Grafton.
A.B., West Virginia University, 1893.
Physics.

Hackney, Lillian May, Morgantown.
A.B.L., West Virginia University, 1893.
Physics.

Hannah, C. Gilbert, Morgantown.
A.B., St. Stephen's College.
Philosophy.

Hite, Rachel Evelyn, Morgantown.
A.B., West Virginia University, 1898.
History.

Jacob, Samuel Springg, West Liberty.
B.S., West Virginia University, 1895.
Physics.

Knutti, John Gottleib, Fairmont.
A.B., West Virginia University, 1897.
Physics.

Hoff, Silas Marion, Auburn.
A.B., West Virginia University, 1899.
Philosophy.

Lee, James McMillan, Pittsburg, Pa.
A.B., West Virginia Universtiy, 1878; A.M., ibid., 1881.
Physics.

Lough, Myron Carleton, Fairmont.
A.B., West Virginia University, January 2, 1900.
Pedagogy.

McChesney, Alexander Gallatin, Charleston.
A.B., West Virginia University, April 3, 1900.
Latin.

McCutcheon, John Lewis, Morgantown.
A.B., Rochester University, 1884; A.M., ibid., 1888.
Philosophy.

McKinley, Bruce, Pullman.
A.B., West Virginia University, January 2, 1900.
English.

Ohern, Daniel Webster, Morgantown.
A.B., Drake University, 1898; A.M., West Va. University, 1899.
Geology.

Pollock, William McCally, Morgantown.
A.B., West Virginia University, 1899.
Botany.

Reynolds, Arthur, Martin's Ferry, Ohio.
A.B., Marietta College, 1891.
History.

Reynolds, Ethel Toy, Morgantown.
B.S., West Virginia University, 1897.
English.

Reynolds, Wayland Fuller, Morgantown.
A.M., West Virginia University, 1890.
Philosophy.

Ryan, William Dunn, Morgantown.
A.B., Drake University, 1898.
Geology.

Shaw, John Coombs, Kasson.
B.S., University of Nashville, 1892; M.S., ibid., 1894.
Pedagogy.

Smith, Alpheus Wilson, Philippi.
A.B., West Virginia University, April 3, 1900.
English.

Standiford, William Russell, Elm Grove.
A.B., West Virginia University, 1897.

Wallace, Ira Melvin, Morgantown.
A.B., Thiel College, 1894.
Philosophy.

White, Orilas Grant, Parkersburg.
A.B., Bethany College, 1898; A.M., West Va. University, 1899.
Economics.

White, Anna Bancroft, Morgantown.
A.B., West Virginia University, 1895.
History.

—41

The College of Arts and Sciences.

Seniors.

		Major Subject.
Barnes, Isaac Allen,	Morgantown,	Philosophy.
Barrickman, Van Ara,	Morgantown,	Law.
Browning, Bertha Cleland	Wellsburg	English.
Bush, Ira Benton,	Auburn,	Greek.
Butcher, Willa Hart,	Fairmont,	Greek.
Charter, Lothrop Russell, Jr.,	West Union,	Economics.
Conley, Emma	Fond du Lac, Wis.,	Sociology.
Conley, Geo. Washington	Craigmoor,	Physics.
Connell, John Harden,	Wellsburg,	History.
Brahm, Grace Lunsford,	Fairmont,	English.
Core, Minnie Leigh,	Mt. Morris, Pa.,	English.
Ebers, Charles Henry,	Benwood,	Pedagogy.
Fortney, Lorain,	Athens,	Philosophy.
Frank, Harrison Jules Louis,	Wheeling,	Philosophy.
Frankenberger, Hugo,	Charleston,	English.
Garrison, James A.,	Jollytown, Pa.,	Philosophy.
Gore, Howard Mason,	Clarksburg,	Philosophy.
Hall, Leonard Stout,	New Martinsville,	English.
Hennen, Ray Vernon,	St. Cloud,	Mathematics.
Hickman, Charles Benton,	Fairmont,	English.
Hott, David, Jr.,	White Hall, Va.,	English.
Jamison, Gillian,	Morgantown,	French.
Janes, William,	Philippi,	Law.
Jones, Hannah Louise,	Morgantown,	German.
John, William Scott,	Rosedale, Pa.,	Philosophy.
Lemen, David,	Shepherdstown,	Greek.
Lowe, Scott Cephas,	Eldora,	Law.
Martin, William Gregory,	Shepherdstown,	Law.
Maxwell, Haymond,	Clarksburg,	Law.
McCrum, Arlington Bliss,	Aurora,	Law.
McDonald, Peerce Naylor,	Charles Town,	Philosophy.
McGlumphy, Walter Alex.,	Rocklick,	Law.
McVicker, Alberta Claire,	Morgantown,	English.
Meredith, James Alva,	Alma,	Law.

Moreland, James Rogers,	Morgantown,	Law.
Poe, Clarence,	Grafton,	History.
Randolph, Clyde,	Salem,	Mathematics.
Rightmire, Ina,	Morgantown,	German.
Robe, Wilbur Lawrence,	Morgantown,	Mathematics.
Rogers, Harold Frantz,	Moundsville,	Philosophy.
Roller, Benj. Richardson,	Charleston,	Greek.
Roller, Robert Douglas, Jr.,	Charleston,	Mathematics.
Rosier, Joseph,	Fairmont,	English.
Scott, Buckner Fairfax,	Terra Alta,	Chemistry.
Shaffer, Phil Anderson,	Martinsburg,	Chemistry.
Smith, Lee,	Uniontown, Pa.,	Philosophy.
South, Walter Haines,	Morgantown,	Latin.
Stalnaker, Edwards Stuart,	Martinsburg,	Chemistry.
Trembley, Charles Edward,	Terra Alta,	Pedagogy.
Waddell, Charles Walter,	Brandonville,	Greek.
Whitham, George Robins,	Morgantown,	Chemistry.
Willey, Chauncey DeWitt,	Morgantown,	Law.
Willis, John Augustine,	Summit Point,	Mathematics.
Yeager, Lewis Armstrong,	Marlinton,	Law.

—54

Juniors.

Bayles, William Halderman,	Gladesville,	Rhetoric.
Berkeley, Fannie Campbell,	Morgantown,	French.
Bitner, Leila Hinkle,	Kearneysville,	Rhetoric.
Bittle, Mona Alethea,	Morgantown,	Latin.
Brooke, Chas. Fred'k Tucker,	Morgantown,	Greek.
Colebank, Ora Octave,	Stewartstown,	Philosophy.
Cooper, Price Winfred,	Auburn,	Law.
Correll, Harry Davis,	Lewisburg,	Agriculture.
Crossland, Howard Ralph,	New Haven, Pa.,	Chemistry.
Cushwa, Frank William,	Martinsburg,	German.
Derbyshire, Charles Edward	Huntington,	Philosophy.
Dille, Rachel Jane Hagans,	Morgantown,	Greek.
Dodson, Raymond,	Spencer,	English.
Hawse, Allen Lee,	Needmore,	English.
Hayes, Flora Ray,	Morgantown,	German.
Johnson, Sarah Waugh,	Morgantown,	Zoölogy.
Langfitt, James Valentine,	Eagle Mills,	Zoölogy.
Lardin, Frank Miller,	Masontown, Pa.,	Law.
Love, John Andrew Collins,	Elkhorn,	Chemistry.
McConkey, Orie,	Clarksburg,	Physics.
McGregor, Frank Herbert,	Cairo.	Law.
McMurphy, Jerome Case,	Oak Park, Ill.,	Greek.
McWhorter, Charles Nathan,	Lewisburg,	Law.

5-4
4 2

Meyers, Howard Melchior,	Bramwell,	Greek.
Meyers, Walter Howard,	Shepherdstown,	Philosophy.
Miller, Alex. McVeigh, Jr.,	Alderson,	English.
Miller, Gilbert Benton,	Kearneysville,	Greek.
Miller, Irene,	Alderson,	English.
Miller, Jacob Franks,	Oldframe, Pa.,	Philosophy.
Muldoon, John Dement,	Triadelphia,	English.
Neely, Matthew Mansfield,	Smithton,	Law.
Norris, Rebecca Lupton,	Glenville,	Chemistry.
Provence, Leana Hague,	Masontown, Pa.,	English.
Shisler, John Hoffman,	Morgantown,	Chemistry.
Shloss, Sidney,	Morgantown,	Latin.
Shriver, Ross Chalfant,	Wadestown,	Philosophy.
Shuttleworth, Benj. Franklin,	Clarksburg,	Philosophy.
Smith, William Winfred,	Ceredo,	Sociology.
Sanders, Mary Virginia,	Maidsville,	Physics.
St. Clair, Harry Alonzo,	Stewartstown,	Rhetoric.
Vannoy, John Dexter,	Morgantown,	English.
Yager, Mary Louise,	Wheeling,	German.

—42

Sophomores.

Alexander, Clyde,	Morgantown,	Law.
Baumgardner, Wm. Michael,	Morgantown,	Greek.
Bennett, Lawrence Edward,	Ireland,	English.
Beall, Clarence Hough,	Morgantown,	Greek.
Bowman, Frank Lewellyn,	Charleroi, Pa.,	Law.
Boyd, Robert Hanson,	Martinsburg,	Law.
Brown, Robert Morrow,	Morgantown,	Law.
Beall, J. Tipping,	Capon Bridge,	English.
Cox, Boaz Baxter,	Morgantown,	Latin.
Dailey, James Thomas,	Buckhannon,	Law.
Dawson, Daniel,	Charleston,	Latin.
Duval, Harding LeMoyne,	Wellsburg,	English.
Eary, John Wesley,	Victor,	Law.
Freshwater, Philip,	Penrith,	History.
Harvey, Marie Eleanor,	Morgantown,	History.
Herod, Francis Clyde,	Morgantown,	Rhetoric.
Hill, Lucian Anselm,	Hinton,	Chemistry.
Hubbard, Beulah Brock,	Morgantown,	Zoölogy.
Keener, Hayes Harold,	Waynesburg, Pa.,	Zoölogy.
Largent, Robert Joseph,	Paw Paw,	Latin.
Lewis, Ernest Daniel,	Johnstown,	Latin.
Lively, Henry Shaw,	Weston,	Law.
Miller, Dwight Edmund,	Morgantown,	English.
Miller, Frances Livermore,	Monongah,	Greek.

Morgan, Lily Sarah,	Rivesville,	English.
Richards, Edgar Ulysses,	New Cumberland,	Greek.
Robinson, Delbert Thomas,	Grafton,	Law.
Rose, Herschel Hampton,	Mannington,	English.
Sennett, Maud Savilla,	Morgantown,	German.
Stalnaker, Elizabeth M.,	Martinsburg,	German.
Stathers, Madison,	Alma,	Latin.
Taylor, Ernie Pearl,	Morgantown,	Mathematics.
Watkins, William Merle,	Grafton,	Mathematics.
Waugh, Frances Belle,	Wellsburg,	German.
Williams, Howard S.,	Duo,	English.
Wood, Florence Arnold,	Morgantown,	French.

—36

Freshmen.

Burns, Laviga Washington,	Meadow Bluff,	Pedagogy.
Cobun, Linnie Belle,	Morgantown,	German.
Collett, Albert Jackson,	Beverly,	Chemistry.
Cooke, Jean Valjean,	Morgantown,	Latin.
Coplin, Mary,	Boothesville,	Rhetoric.
Corbin, Blanche,	Fairmont,	English.
Crago, Eva Laura,	Wheeling,	English.
Davis, Aldis L.,	Salem,	Physics.
Grant, Hannah Elizabeth,	Morgantown,	Drawing.
Grant, Edith Mary,	Morgantown,	French.
Halstead, Ada Mae,	Kessler's Cross Lanes,	Mathematics.
Hayes, Jeannette Clements,	Morgantown,	French.
Kunst, Frank Batson,	Pruntytown,	Chemistry.
Leech, Fannie May,	Morgantown,	English.
Miller, Lawrence Paxton,	Alderson,	Rhetoric.
Montoulieu y de la Torre, E.,	Puerto Principe, Cuba,	Law.
Morris, Tusca,	Metz,	Law.
O'Neill, Harry Francis,	Pittsburg, Pa.,	Law.
Parsons, William Ewin,	Morgantown,	English.
Peck, Herbert Cromwell,	Philippi,	Latin.
Provence, Lida Ethel,	Masontown, Pa.,	Latin.
Richards, Fred'k Franklin,	New Cumberland	Greek.
Shaw, William Roy,	Terra Alta,	English.
Shelford, Victor Ernest,	Chemung, N. Y.,	Zoölogy.
Snyder, Louis Clark,	Laurel Point	
Strosnider, Homer,	Center Point,	Greek.
Thomas, Seth,	Mason.	
Wayt, William H.,	Fanlight,	Greek.
Wertz, Edna Earle,	Huntington.	
Whitehill, Elizabeth Wilson,	Morgantown,	English.
Wilson, Virginia Farragut,	Morgantown,	English.

Wiren, Aurora,..... Minneapolis, Minn.,.....Rhetoric.
Wood, George Washington,. Morgantown, ...Rhetoric.
Wright, Mattie Ellen,..... Uniontown, Pa., ...Chemistry.
Yoke. Frank Roy,..... Morgantown, ...History.
—35

Premedical Students.

Adams, Edith Hortense.....Ravenswood.
Casey, Thomas Jeremiah.....Morgantown.
Dent, Samuel Marmaduke.....Duke.
Downey, John Otho.....Martinsburg.
McMurtrie, Robert Wells.....Latrobe, Pa.
Moreland, Henry Lazier.....Moyer, Pa.
Moore, Phoebia..... .....Mannington.
Pepper, Claude..... .....Flemington.
Smith, John Calvin.....Salem.
Steele, Harry George.....Keystone.
—10

Special Students.

Major Subject.

Adamson, Estelle Greenlee,. Morgantown, ...Elocution.
Alderson, Virginia Gray,.... Alderson, ...French.
Allender, Bernadine Blanche, Grafton, ...Elocution.
Baird, Hallie Adella,..... Elm Grove.....
Baker, Edward Singleton,... Bramwell, ...Latin.
Bayles, Minnie Merle,.....Gladesville, ...English.
Bentley, Emma Davis,..... Berkeley Springs,.....French.
Bibbee, Charles Halsey,.... Lorentz, ...History.
Boyd, George Frank,.....Morgantown. .....
LL.B., West Virginia University, 1899.
Brackin, John Tudor,..... Philadelphia, Pa.,.....Physics.
Brown, Lucie Sara,..... New Cumberland.....German.
Burnett, Charles Percy,.....Spokane, Washington,.....Chemistry.
Capito, Henry Charles,.....Charleston, ...German.
Carle, Ethel,.....Eatons, ...Pedagogy.
Chambers, Harriet Eva,..... New Cumberland,.....English.
Cole, Lora Sophia,.....Morgantown, ...French.
Conaway, Benj. Franklin,... Mannington, ...Chemistry.
Conrad, James Ballard,..... Addison. .....
Cooper, Frank Scott,..... Red Star,.....English.
Cotton, Reardon Stewart,... Pittsburg, Pa.....
Davis, Bessie Belle,..... Morgantown, ...Latin.
Davis, John Lloyd,..... Worthington. .....
Duff, James Henderson Kirk, Pittsburg, Pa.....
Eaton, Oliver Knight,.....McKeesport, Pa.....
Egbert, Ella Elizabeth,.....North Hector, N. Y.,.....Sociology.

Eitenmiller, Frank Wenton,. Bellevue, Pa.....
Eliason, Amy Ermine,..... Fairmont. .....
Elkin, Lillie May,.....Jeannette, Pa.....
Findley, Ai Judson,..... Mineral. .....
Frazer, Leila Jessie,..... Morgantown, ...Rhetoric.
LL.B., West Virginia University, 1899.
Frum, Orestes Ward,..... Morgantown. .....
Gallup, Elizabeth McLennan,. Morganton, ...English.
Garrison, Olive May,..... Morgantown, ...
Grice, Anna Rebecca,..... Morgantown, ...English.
Hackney, Blanche,..... Morgantown, ...Latin.
Hagan, Dora Estelle,..... Huntington. .....
Hannah, Mrs. C. Gilbert,.... Morgantown, ...Sociology.
Haymond, Ada..... Salem, ...History.
Herd, Virginia..... Morgantown, ...English.
Hill, Dorothy,..... Jeannette, Pa.....
Hill, Thomas Getzendaner,.. Grafton, ...Greek.
Hodges, Baxter Coleman,... Harrisville, ...Physics.
Hopkins, Louise,..... Morgantown, ...Drawing.
Howe, Rosalie Boughner,... Morgantown,.....Domestic Science.
Hubbs, George Emanuel,.... Glen Easton.....
Hull, Abigail Mary,..... Morgantown,.....Domestic Science.
Humphrey, Thomas Jackson, Grafton. .....
Ireland, Addie Rosalie,..... Morgantown. .....Drawing.
Jacob, Mary Lillian,.....West Liberty,.....
Jefferson, Maud Iona..... Moundsville. .....
John, Daisey Belle,..... Morgantown, ...Rhetoric.
Johnson, Agnes Stephenson,. Morgantown, ...French.
Johnson, Anna Louise,..... Morgantown, ...Rhetoric.
Johnson, Nell Chancellor,... Morgantown, ...French.
Jolliffe, Frank Cowan,..... Ringgold. .....
Kelley, Mozell,..... Addison, ...Rhetoric.
Kemper, Tillman Francis,... Salem. .....
Kendall, Ramer Oscar,..... Elkins, ...English.
Klepper, William Henry,.... Mt. Holly Springs, Pa.,.....German.
Koehnlein, Anna Nora,..... Jeannette, Pa.....
Lewis, James Chambers,.... Valley Grove.....
Lewis, Laura Frances,..... Aberdeen, ...English.
Linn, Edna Hamilton..... Glenville. .....
Logan, Mary,..... Penrith. .....
Lough, Myrtle,..... Morgantown, ...Latin.
Lowe, Rhoda Lydia,..... Shinnston. .....
Martin, Ella Hays,..... Cairo. .....
McBride, Douglas L. Banks,. Washington, D. C.,.....Chemistry.
McElroy, Samuel W.,..... Pompton, N. J.,.....Civil Engineering.
McGrew, Julia,..... Morgantown, ...English

McIntosh, Elizabeth Orr,	Parkersburg	
McMillan, Jesse Vincent,	Dennison, Ohio	
Miller, Charles J.,	Shepherdstown	
Miller, Edmund Dittmar,	Vanderbilt, Pa	
Mitchell, Ralph Cadwallader,	Glade Farms,	Chemistry.
Moore, Leander,	Walton	
Morgan, Etta,	Gans, Pa.,	History.
Morris, Hortense	Harrisville,	Latin.
Neel, Isa Maud,	Pullman,	English.
Nutter, Bessie,	Oxford,	History.
Orr, Mary,	Roney's Point	
Park, Stella May,	Bula	
Patterson, Mary Amy Bonner,	Morgantown,	Rhetoric.
Phillips, Albert Wendell,	Utica, Montana	
Pierce, Clive Dwight,	Morgantown,	English.
Pollock, Bernice Evangeline,	Morgantown	
Postlethwait, Wm. Jackson,	Dean	
Printz, Benjamin Graeff,	Morgantown,	Zoölogy.
Proctor, Eunice Haymond,	Ravenswood	
Proeger, Louise Wilhelmina,	Greensburg, Pa	German.
Provence, Millicent May,	Masontown, Pa.,	History.
Provence, Nannie Emily,	Masontown, Pa	Drawing.
Robb, Catherine Christie,	New Cumberland	
Shape, Francis Allfree,	New Salem, Pa	Philosophy.
Shingleton, Edward Tyndall,	Belmont,	French.
Shuttleworth, Mary Catherine,	Little Falls,	History.
Sigourney, Daniel Paul,	Clarksburg,	Greek.
Simms, Hugh Morton,	Charleston	
Sliter, Florence Madison,	Middletown, N. Y	German.
Stender, Leo Lawrence,	New Martinsville	German.
Stewart, Jane Pearl,	Fairview	
Taylor, Florence Naomi,	Holliday's Cove	Domestic Science.
Thayer, Mrs. Alfred E.,	Morgantown,	German.
Thomas, James Putney,	Charleston,	Chemistry.
Thomas, Mary Ellenor,	Bula	
Turrell, Marion Charles,	New Castle, Pa	
Twigg, Wilbur Wisingford,	Davis	
Utt, Oranna Ellen,	Morgantown,	Elocution.
Washburn, Charles Henry,	Webster	
Wertz, William Wesley,	Charleston	
Whinery, Orland B.,	Winona, Ohio	
White, Edith Nina Miller,	Morgantown,	English.
White, Nellie Morehead,	Morgantown	
Whitham, Mary,	Valley Grove	
Willey, Guy Allen,	Morgantown,	Physics.
Wilson, Agnes Ellen,	Pennsboro	

Wilson, Edgar R.,..... Majorsville, ...History.
Wilson, Edith Margaret,.... Charleston. .....
Wiren, Frances,..... Minneapolis, Minn.,.....French.
—118

The College of Engineering and Mechanic Arts.

Seniors.

Eakin, John Ross,.....C.E.....New Martinsville.
Holland, Walter Forse,.....C.E. .....Morgantown.
Ireland, Emory Ison,.....C.E.....White Oak.
Lowe, Walter Loring,.....M.E. .....Shinnston.
Six, William Louis,.....C.E. .....Wadestown.
Yoho, Robert Calvin,.....C.E.....Rosby's Rock.
—6

Juniors.

Burk, Fred Ross,.....C.E.....Pittsburg, Pa.
Burns, Dana Blackburn,.....C.E. .....Burnsville.
Dickey, Albert Ford,.....C.E. .....Huntington.
Jenkins, Opha Fleming,.....M.E. .....Morgantown.
Lang, Thomas Simeon,.....C.E. .....Bridgeport.
Rogers, Ralph,.....M.E. .....Morgantown.
Ross, John Gilmore,.....C.E. .....Morgantown.
Swallow, Walter Ambrose,.....C.E.....Pittsburg, Pa.
Tabler, Ernest Corban,.....C.E. .....Martinsburg.
Thompson, Louis Clarence,.....M.E. .....Morgantown.
—10

Sophomores

Alexander, William Frank,.....M.E. .....Mannington.
Bailey, Bruce,.....C.E. .....Grafton.
Bayles, George Harmon,.....M.E. .....Easton.
Boughner, Marston,.....C.E. .....Clarksburg.
Gibson, William Herbert,.....C.E. .....Tunnelton.
Hutchinson, Frank David,.....C.E. .....Keyser.
Killingsworth, Robert Huffman,.....C.E. .....Trubada.
Larew, Hiram Gordon,.....C.E. .....Independence.
Maxwell, Earle Cook,.....C.E. .....Wheeling.
Muldoon, Frank Walker,.....M.E. .....Morgantown.
Nelson, Martin Emmett,.....C.E. .....Halleck.
Robinson, Carel,.....C.E. .....Charleston.
—12

Freshmen.

Briggs, Charles Wesley,.....C.E. .....Wellsburg.
Cole, Emmert Luther,.....C.E. .....Morgantown.

Howe, James Vance,.....C.E. .....Morgantown.
Lucas, Arthur Mapel,.....C.E. .....Morgantown.
Montoulieu y de la Torre, Enrique,...C.E...Puerto Principe, Cuba.
Moore, Charles Larkin,.....C.E.....Brownsville, Pa.
Patton, Benjamin Franklin,.....C.E. .....Harrisville.
Price, William Chalfant,.....C.E. .....Morgantown.
Watson, George Thomas,.....C.E. .....Fairmont.
—9

Special Students.

Burns, David Fay,.....C.E. .....Morgantown.
Christy, Cyrus Moats,.....C.E.....Delmont, Pa.
Cooper, William Jonathan,.....M.E. .....Parkersburg.
Deming, Lee Clarence,.....M.E.....Oil City, Pa.
Filson, George Carl,.....C.E.....New Cumberland.
Hallock, Albert Gibbs,.....C.E. .....Wheeling.
Harvey, William,.....C.E.....Frostburg, Md.
Hoard, James Luther,.....M.E. .....Hoard.
Kunkle, James Henry,.....M.E. .....Morgantown.
Murphy, James Scott,.....M.E. .....Morgantown.
Sample, Charles Henry,.....M.E. .....Fairmont.
Smith, Robley Tom,.....M.E. .....Weston.
Thurmond, Walter Rippetoe,.....C.E. .....Thurmond.
Willis, Jesse Joshua,.....C.E. .....Bridgeport.
Willis, Floyd Templeton,.....C.E. .....Bridgeport.
—15

The College of Agriculture.

Graduate Students.

Atkeson, Thomas Zephaniah, Buffalo.
B.Agr., West Virginia University, 1899.
Johnson, Thomas Carskadon, Morgantown.
B.S.Agr., West Virginia University, 1896.
Naret, William Frazier, Morgantown.
B.Agr., West Virginia University, 1898; B.S.Agr., ibid., 1899.

Seniors.

Jones, Elbert,.....B.Agr. .....Rivesville.
Symms, Clarence,.....B.Agr. .....Karn.
—2

Sophmores.

Moreland, Henry Lazier,.....B.S.Agr. .....Morgantown.
—1

Freshmen.

Atkeson, Karl Clark,.....B.Agr. .....Buffalo.
Click, Andrew Leopold,.....B.Agr. .....Cottageville.
Miller, Archie Hamilton,.....B.Agr. .....Fairmont.
Wells, Carrie Samantha,.....B.Agr. .....Buffalo.
—4

Special Students.

Alexander, Henry Cooke.....Charles Town.
Atkeson, Mary Meek.....Buffalo.
Buchanan, Joseph Kerr.....Morgantown.
Butterfield, Harry Cummings.....Brownsville, Pa.
Carter, Charles Clay.....Brownsville, Pa.
Correll, Harry Davis.....Lewisburg.
Davis, Frank Amos.....Morgantown.
Fairfax, Ralph Bernard.....Reedsville.
Goode, Joseph Smith.....Auburn.
Hall, Josiah Springer.....Cassville.
Hopkins, Charles Lloyd.....Lloydsville.
John, Gilbert Madison.....Morgantown.
Kunst, Frank Batson.....Pruntytown.
McDonald, James William, Jr.....Darkesville.
Morgan, Rembrandt.....Poca.
Parsons, William Ewin.....Morgantown.
Parsons, Francis Anne.....Morgantown.
Stewart, James Vance.....Morgantown.
Smith, Earle Harry.....Fairmont.
Walton, William Karl.....Cameron.
Wiles, Luther Young.....Morgantown.
Williams, Howard E.....Duo.
—22

The College of Law.

Seniors.

Barnitz, Edward Staples,.....LL.B. .....Elkhorn.
A.B., Roanoke College, 1880.
Barrickman, Van Ara,.....LL.B. .....Morgantown.
Butler, Seaton Garland,.....C. .....Parkersburg.
Byrnside, Marshall A.,.....C. .....Burdette.
Caldwell, Gibson Lamb,.....LL.B. .....Wheeling.
Cato, Henry Stuart,.....C.....St. Albans.
Coleman, Thomas,.....LL.B.....Muses Bottom.
A.B., Marietta College, 1893,
A.M., Columbia University, 1897.
Cookman, John,.....C. .....Auburn.

Daniel, Jesse Ward,.....C. .....Beury.
Day, Clay,.....C. .....Mouth of Senaca.
Donahey, Joseph Henry.....C. .....Pittsburg, Pa.
Easley, David Milton,.....C. .....Bluefield.
Guy, Robert Emmett,.....C. .....Lewisburg.
Hendrick, John James,.....C. .....Plumbranch, Va.
Holsberry, Leroy Virgil,.....C. .....Meadowville.
Hughes, William Wellington,.....LL.B. .....Mineral.
Hundley, John Palmer,.....C. .....Evansville.
Langley, Count Lee,.....C. .....Charleston.
Meredith, James Alva,.....LL.B. .....Alma.
Radcliffe, Count Lee,.....C. .....Wheeling.
Rose, Charles Curtin,.....LL.B.....Clarksville, Pa.
B.S., Waynesburg College, 1896.
Smith, Gerald Newton,.....C. .....Dayton.
Snee, William Jefferson,.....C.....Epton, Pa.
Swint, Charles Patrick,.....C. .....Weston.
Weaver, Frank,.....C. .....Morgantown.
Wiles, George Rogers Clark,.....C. .....Spaulding.
—26

Juniors.

Alexander, George Heckert,.....C.....St. Mary's.
Archer, L. D.,.....C. .....Georgia.
Barnhart, William Gray,.....C.....Red House Shoals.
Beltzhoover, George Morris, Jr.,.....LL.B. .....Shepherdstown.
A.B., West Va. University, 1899.
Bland, Robert,.....C. .....Blandsville.
Bond, Edwin Sortorus,.....C. .....Horton.
Bowman, William Byrne,.....C. .....Rowlesburg.
Brackman, Mason Clarke,.....C. .....Ronceverte.
Brandon, Charles Wyatt,.....C. .....Elkins.
Brown, Albert Gallatin,.....C. .....Worley.
Carlin, Ernest Burton,.....C. .....Sutton.
Cason, Philip Alonzo,.....C.....Rockville, Ind.
Chapman, Alexander Campbell,.....LL.B. .....Morgantown.
B.S., Bethany College, 1898.
Christner, Braden Hurst,.....C.....Moyer, Pa.
Cochran, William Lynn,.....C.....St. Albans.
Coleman, Herbert M.,.....C. .....Iaeger.
Cook, Fieldon Clarke,.....C. .....Norwood.
Corbin, Frank Pickering,.....C. .....Ellenboro.
Correll, Samuel Oscar,.....C. .....Frankford.
Craig, Bruddy,.....C. .....Summersville.
Crockett, George Perry,.....C.....Graham, Va.

Cutright, Lymen,.....C. .....Sago.
Davis, Herbert Orland,.....C. .....Elizabeth.
Downey, Frank LeFevre,.....C. .....Martinsburg.
Edwards, Russell,.....C. .....Wheeling.
Farmer, Charles Sumner,.....C.....New Martinsville.
File, Ashton,.....C.....Mt. Hope.
Friedberg, Joseph,.....C.....Uniontown, Pa.
Garrison, Harry Alpheus,.....LL.B. .....Morgantown.
Hall, Charles Leonard,.....C.....New Martinsville.
Hall, Frederick Allen,.....C. .....Washburn.
Hardwick, Daniel Boone,.....C. .....Wayne.
Harper, Jacob Milton,.....C. .....Spencer.
Harrison, Orville Lloyd,.....C. .....Enterprise.
Hepburn, Nannie Katharine,.....C. .....Piedmont.
Herd, Charles Thomas,.....C. .....Morgantown.
Higginbotham, Abel Parker Upshur,..C. .....Lerona.
Hodges, Milton Stanley,.....LL.B. .....Keyser,
A.B., Ohio Wesleyan University, 1899.

Horner, Thomas Ramage,.....C. .....Clarksburg.
Hughes, Charles Francis.....C. .....Wheeling.
Hughes, George E.,.....C. .....Wheeling.
Ice, Elias Clark,.....C. .....Mannington.
Jessup, Wilfred,.....C. .....Richmond, Ind.
Johnson, Edward Marshall,.....C. .....Points.
King, David Harlan,.....LL.B.....Vineland, N. J.
King, Joseph Miller Vivian,.....LL.B. .....Morgantown.
King, Stuart Robinson,.....C.....Mt. Nebo.
Koonce, Darrell Kenneth,.....C. .....Halltown.
Laing, Thomas Kenneth,.....LL.B. .....Sun.
A.B., Hampton-Sydney College, 1899.

Leonard, Daniel Blake,.....C. .....Parkersburg.
Long, Edd Leslie,.....C. .....Alma.
McAfee, Julius Wilbur,.....C.....Washington, D. C.
McCaffrey, Bert,.....C.....Bartramville, Ohio.
McIntire, Thayer Melvin,.....C.....New Martinsville.
McKinney, Odell Payne,.....C. .....Fairmont.
McVey, Elmo,.....C. .....Fayetteville.
Newcomer, Frank Coldren,.....C.....High House, Pa.
Patterson, George,.....C. .....Percy, Pa.
Pierce, Carleton Custer,.....C. .....Rowlesburg.
Piles, Adolpha A.,.....C. .....Newburg.
Pownall, Thomas Edwin,..... C. .....Rio.
Powell, Samuel Alfred,.....C. .....Rockport.
Ramsay, Robert Lincoln,.....C.....New Cumberland.
Riggs, Frank Winfield,.....C.....Union Ridge.

Sayre, Harold Ross,.....C.....New Martinsville.
Shriver, John,.....C. .....Morgantown.
Singhass, Walter Fry,.....C. .....Springfield.
Smoot, George Whitfield,.....C. .....Sheridan.
Spurlock, Watt Evermont,.....C. .....Hamlin.
Stewart, Terence David Boston,.....C. .....Charleston.
Stump, Charles Wilbur,.....C. .....Charleston.
Taylor, John Lee,.....C. .....Cascara.
Tiernan, John Holt,.....C. .....Wayne.
Townsend, Tom Chasteene.....C. .....Lansing.
Trippett, William B.,.....C. .....Union Ridge.
Tustin, Valentine Tilden,.....C. .....Wadestown.
White, Kemble,.....LL.B. .....Matewan.
A.B., West Virginia University, 1894.
Wooddell, Will Lawrence,.....C. .....Addison.
Wolverton, John Marshall,.....C. .....Big Bend.
Wright, Robert V.,.....C. .....Uniontown.
—80

Special Law Students.

Bowman, Stuart Hampton,.....Valley Furnace.
A.B., West Virginia University, 1898.
Flournoy, Harry Lightfoot,.....Charleston.
Glasscock, William Ellsworth,.....Morgantown.
Hammond, Hugh LaRue,.....Central Station.
Hendrick, Thomas William,.....Morgantown.
Jansen, Gerhard Christian,.....Wheeling.
Lavelle, Charles Joseph,.....Uniontown.
Lehman, John Lee,.....Fairmont.
Marple, Albert Enoch,.....Calcutta.
Moore, Kit Carson,.....Joseph's Mills.
Ridenour, Emory Martin.....Schoolhouse.
Smith, Jacob David,.....Hamlin.
Warder, Hugh,.....Grafton.
Wolfe, Clinton Aubrey,.....Given.
Wolfe, Luther J.,.....Given.
—15

The School of Music.

Piano.

Agnew, Grace Estelle.....Morgantown.
Aldrich, Alice Kennard.....Morgantown.
Alderson, Virginia Gray.....Alderson.
Baird, Hallie Adella.....Elm Grove.
Bartlett, Tessa Hester.....Simpson.
Bennett, Sara Ann.....Morgantown.

Bentley, Emma Davis.....Berkeley Springs.
Brown, Lucie Sara.....New Cumberland.
Buchanan, Margaret.....Morgantown.
Burns, Mary Hogues.....Morgantown.
Carroll, Mary McKee.....Kingwood.
Corbitt, Garland Crozier.....Waverly.
Courtney, Crystal.....Randall.
Courtney, Lizzie Lee.....Morgantown.
Courtney, Lula Pearl.....Morgantown.
Cox, Elmira Estelle.....Morgantown.
Cruciger, Clara Frances.....Morgantown.
Crumrine, Rhoda.....Cameron.
Cummins, John William.....Wheeling.
Davis, Bessie Belle.....Morgantown.
Dering, Grace Enzey.....Morgantown.
Dille, Maude Evens.....Morgantown.
Donley, Nellie Grant.....Mount Morris, Pa.
Eddy, Martha Delmere.....Bula.
Evans, Lida.....Halleck.
Fast, Etta May.....Old Frame, Pa.
Fitch, Katie Finnell.....Morgantown.
Fitch, Jessie Johnson.....Morgantown.
Fleming, Sara Rebecca.....Morgantown.
Fravel, Mary Stewart.....Poca.
Garlow, Sadie Ruth.....Rosedale, Pa.
Gilbert, Sue Carskadon.....Piedmont.
Grant, Edith May.....Morgantown.
Gregg, Bessie Lee.....Morgantown.
Hackney, Blanche.....Morgantown.
Hagan, Dora Estelle.....Huntington.
Hayes, Flora Ray.....Morgantown.
Hartigan, Elizabeth Willey.....Morgantown.
Herd, Virginia.....Morgantown.
Hite, Evelyn Pratt.....Morgantown.
Holland, Mary Nell.....Uffington.
Houston, Ada Virginia.....Morgantown.
Howe, Rosalie Boughner.....Morgantown.
Jennings, Maud Katharyne.....Morgantown.
Johnson, Anna Louise.....Morgantown.
Johnson, Nellie Kay.....Grantsville.
Keener, Beulah Blanche.....Morgantown.
Koontz, Lola Gertrude.....Kessler's Cross Lanes.
Layton, Lulu Eugenie.....Morgantown.
MacDowell, Annie Winona.....Uniontown, Pa.
McGrew, Julia.....Morgantown.
Miller, Ella Wood.....Wellsburg.

Miller, Lenore.....Addison.
Miller, Irene.....Alderson.
Miller, Margaret.....Morgantown.
Miller, Pauline Barnes.....Morgantown.
Miller, Peri Inez.....Dilliner, Pa.
Morgan, Ardea.....Mannington.
Morgan, Etta.....Gans, Pa.
Morgan, Jessie Lee.....Gans, Pa.
Morgan, Mary Elvira.....Ringgold.
Nelson, Ina Forrest.....Morgantown.
Norris, Anna Wilson.....Harrisville.
Norris, Edna Vernus.....Littleton.
Nuzum, Emma.....Boothsville.
Phillips, Netta Aline.....Morgantown.
Patterson, Majorie Bonner.....Morgantown.
Posten, Effaline Muriel.....Morgantown.
Price, Edith Pearl.....Morgantown.
Proctor, Eunice Haymond.....Ravenswood.
Protzman, Blanche.....Morgantown.
Reed, Mary Ella.....Morgantown.
Reiner, Elsie Maud.....Easton.
Reiner, Eva Mendora.....Easton.
Reynolds, Inez Brohard.....Morgantown.
Ross, Minerva Emma.....Simpson.
Ruble, Anna.....Fairchance, Pa.
Sadler, Zella.....Point Marion, Pa.
Sanders, Helen Maude.....Morgantown.
Shingleton, Edward Tyndall.....Belmont.
Showalter, Anna Brock.....Harrisville.
Smith, Bertha Jane.....Sistersville.
Steele, Nellie Victoria.....Morgantown.
Stewart, Stella May.....Mannington.
Stump, Stella Gae.....Grantsville.
Tait, Sara Cope.....Morgantown.
Thayer, May Cahoone.....Morgantown.
Turner, Mary Rebecca.....Morgantown.
White, Nellie Moorhead.....Morgantown.
Whitehill, Anna Wilson.....Morgantown.
Whitehill, Elizabeth Wilson.....Morgantown.
Ward, Emma.....Lee Belle.
Waugh, Frances Bell.....Wellsburg.
Wotring, Mary Adele.....Morgantown.

—95

Voice.

Bentley, Emma Davis.....Berkeley Springs.

Carreau, Cyrille.....New York City.
Crumrine, Martha Irene.....Cameron.
Crumrine, Rhoda.....Cameron.
Dille, Maude Evans.....Morgantown.
Donley, Nellie Grant.....Mount Morris, Pa.
Gilbert, Sue Carskadon.....Piedmont.
Gregg, Mary Edith.....Morgantown.
Hirschman, Hattie.....Morgantown.
Johnson, Belle Wade.....Morgantown.
Logan, Mary.....Penrith.
MacDowell, Annie Winona.....Uniontown, Pa.
Miller, Ella Wood.....Wellsburg.
Miller, Frances Livermore.....Monongah.
Moorhead, Jessie John.....Morgantown.
Mortley, Mary Gage.....Coshocton, O.
Raymond, Josephine.....Morgantown.
Ross, Minerva Emma.....Simpson.
Shingleton, Edward Tyndall.....Belmont.
Showalter, Anna Brock.....Harrisville.
Stewart, Mattie Anne.....Raymond City.
—21

Violin.

Ache, John Christian.....McClellandtown, Pa.
Atkeson, Mary Meek.....Morgantown.
Bartlett, Goedecke Marshall.....Simpson.
Buck, LeRoy.....Morgantown.
Conoway, Benjamin Franklin.....Mannington.
Cox, Lawrence Morgan.....Morgantown.
Craig, Bruddy.....Summersville.
Evans, Enock Jack.....Morgantown.
Fleming, Philip Milton.....Morgantown.
Gainer, James Irving.....Morgantown.
Hall, Frederick Allen.....Washburn.
Hall, Josiah Springer.....Charlotte.
Hoffman, John Henry.....Morgantown.
Hundley, John Palmer.....Evansville.
Johnson, Harry Smith.....Morgantown.
Koontz, Lola Gertrude.....Morgantown.
Martin, Carroll Forman.....Morgantown.
McMurphy, Jerome Case.....Morgantown.
Murphy, James Scott.....Morgantown.
Newman, Howard Judson.....Morgantown.
O'Brien, Frederick William.....Williamson.
Ownby, Frederick Hager.....Morgantown.
Parker, Goldie Love.....Morgantown.

Pierce, Olive Dwight.....Morgantown.
Robb, Catherine Christie.....New Cumberland.
Ross, Justus J.....Simpson.
Schrader, Henry Maxwell.....Lubeck.
Snider, Earl Bailey.....Uniontown.
Threappleton, Joseph Henry.....Morgantown.
Vannoy, John Dexter.....Morgantown.
Weaver, Archie Carleton.....Morgantown.
Wiren, Aurora.....Minneapolis, Minn.
—32

Cornet.

Freed, Arthur Preston.....New Haven, Pa.
—1

Harmony.

Crumrine, Rhoda.....Cameron.
Hayes, Flora Ray.....Morgantown.
Hite, Evelyn Pratt.....Morgantown.
Houston, Ada Virginia.....Morgantown.
Howe, Rosalie Boughner.....Morgantown.
Mortley, Mary Gage.....Coshocton, O.
—6

Banjo.

Auvil, Jesse Herbert.....Iager.
Cooke, Jean Valjean.....Morgantown.
Butterfield, Harry Cummings.....Brownsville, Pa.
McElroy, Samuel Watkins.....Pompton, N. J.
McCrum, Arlington Bliss.....Aurora.
Ward, Roy.....Morgantown.
—6

Mandolin.

Alexander, Henry Cooke.....Charles Town.
Babb, Haven Chester.....Medley.
Bayles, Paul.....Morgantown.
Casto, Charles Everett.....Rockport.
Crumrine, Martha Irene.....Cameron.
Curtis, Kim Devault.....Morgantown.
Daniel, Jesse Ward.....Beury.
Deming, Lee Clarence.....Morgantown.
Donley, Nellie Grant.....Mount Morris, Pa.
Douthat, Dana Glenn.....Morgantown.
Fleming, Hugh Howell.....Fairmont.
Flenniken, Fred Curl.....Morgantown.
Gibson, Clay Ashbel.....Tunnelton.
Greynolds, Flora Centennial.....Beverly.

Hartigan, Elizabeth Willey.....Morgantown.
Hayes, Camille Katherine.....Morgantown.
Herd, Virginia.....Morgantown.
Herod, Francis Clyde.....Morgantown.
Hopkins, Roy Samuel.....Morgantown.
Jamison, Gillian.....Morgantown.
Jolliffe, Frank Cowan.....Morgantown.
Koonce, Darrell Kenneth.....Halltown.
Koontz, James Andrew.....Morgantown.
Leech, Fanny May.....Morgantown.
Leonard, Daniel Blake.....Parkersburg.
McBride, Douglas Laurie Banks.....Washington, D. C.
McBride, Margaret.....Washington, D. C.
McCune, William .....Dawson, Pa.
Miller, Dana Paul.....Morgantown.
Miller, Wayne McCormick.....Dilliner, Pa.
Norris, Edna Vernus.....Littleton.
Ritter, Thomas Minter.....Bristol.
Ross, Charley Fordyce.....Simpson.
Rowland, Helen Doolittle.....Pittsburg, Pa.
Ruble, Anna.....Fairchance, Pa.
Shingleton, Edward Twndall.....Belmont.
Stump, Charles Wilbur.....Charleston.
Stewart, Jane Pearl.....Fairview.
Montoulieu y de la Torre, Enrique.....Puerto Principe, Cuba.
—39

Guitar.

Allender, Blanche Bernadine.....Grafton.
Blose, Charles Walton.....Delmont, Pa.
Burk, Fred Ross.....Pittsburg, Pa.
Burns, Charles Howard.....Morgantown.
Capehart, Jessie Howard.....Morgantown.
Carder, Delia.....Boothsville.
Chambers, Harriet Eva.....New Cumberland.
Click, Andrew Leopold.....Cottageville.
Collins, Earnest Harvey.....Berea.
Davis, Alma Fraulein.....Elizabeth.
Erwin, Daisy Bell.....Morgantown.
Garner, Joshua Hite.....Cascara.
Guseman, Pryor Gay.....Morgantown.
Halstead, Ada Mae.....Kessler's Cross Lanes.
Hodges, Molton Stanley.....Keyser.
Holland, Mary Nell.....Uffington.
Jenkins, Katherine Myrtle.....Morgantown.
Jones, Bettie Cooke.....Morgantown.

Koozer, Agatha Mabel.....Clearfield, Pa.
Laing, Thomas Kay.....Sun.
LeFevre, Edgar Brown.....Morgantown.
McDonald, James William.....Darkesville.
Miller, Ella Wood.....Wellsburg.
Miller, Lenore.....Addison.
Miller, Warren Daniel.....Dilliner, Pa.
Miner, Sabra Lucinda.....Conneaut, O.
Morrison, Don Leon.....Ripley.
Murphy, Edward Everett.....Maidsville.
Nelson, J. Frank.....Morgantown.
Ownby, Monroe.....Morgantown.
Parsons, Frances Anne.....Morgantown.
Peck, Herbert Cromwell.....Philippi.
Provence, Nana Emilie.....Morgantown.
Rhoades, George Carroll.....Dallas.
Rightmire, Edna.....Morgantown.
Ross, Minerva Emma.....Simpson.
Smith, James Henry.....Morgantown.
Swallow, Walter Ambrose.....Pittsburg, Pa.
Tapp, Elizabeth Louise.....Morgantown.
Thalman, Lucas Albert.....Morgantown.
Whitescarver, Elizabeth Lee.....Morgantown.
Wotring, Mary Adele.....Morgantown.
—42

Summary.

Piano	95
Voice Culture	21
Violin	32
Cornet	1
Harmony	6
Mandolin	39
Guitar	42
Banjo	6
Total	242

The Commercial School.

Adamson, Estelle Greenlee.....Morgantown.
Agnew, Grace Estelle.....Morgantown.
Alexander, Henry Cooke.....Charles Town.
Alexander, James Lawrence.....Fort Spring.
Alter, Martha Lena.....Morgantown.
Atkeson, Karl Clark.....Morgantown.

Babb, Samuel Melvin.....Falls.
Babb, Haven Chester.....Medley.
Baird, David Beach.....Wellsburg.
Barbe, Minnie Lee.....Mapleton, Pa.
Bartlett, Goedecke Marshall.....Simpson.
Bartlett, Tessa Hester.....Simpson.
Beltzhoover, George Morris.....Shepherdstown.
Bennett, Albert.....Morgantown.
Blair, Smith.....West Union.
Blose, Charles Walton.....Delmont, Pa.
Boyd, George Frank.....Morgantown.
Brown, Robert Morrow.....Morgantown.
Butterfield, Harry Cummings.....Brownsville, Pa.
Byrnside, Marshall A.....Burdette.
Callaghan, Vincent DePaul.....Connellsville, Pa.
Carman, Earl Park.....New Cumberland.
Carman, Earnest Clark.....New Cumberland.
Carskadon, Edward Blackburn.....Headsville.
Carter, Charles Clay.....Brownsville, Pa.
Cartwright, Richard Eugene.....Scottdale, Pa.
Chancellor, James Camden.....Parkersburg.
Cobun, Alice.....Morgantown.
Cobun, Linnie Belle.....Morgantown.
Cole, Odos Oscar.....Morgantown.
Collins, Ernest Harvey.....Berea.
Corbitt, Garland Crozier.....Waverly.
Correll, Samuel Oscar.....Frankford.
Courtney, Crystal.....Randall.
Cowan, Elsie Morgan.....Morgantown.
Craig, Bruddy.....Summersville.
Cruciger, Felix Max.....Morgantown.
Cruciger, Clara Frances.....Morgantown.
Curry, Robert Bennett.....Addison.
Curtis, Kim Devault.....Morgantown.
Daniel, Jesse Ward.....Beury.
Davis, Walter Oren.....Morgantown.
Davis, Alma Fraulein.....Elizabeth.
Davis, Frank Amos.....Morgantown.
Davis, James William.....Cairo.
Dent, Carrie Louise.....Grafton.
Deusenberry, Iona May.....Morgantown.
Dotson, James Porter.....Donahue.
Douthat, Dana Glenn.....Morgantown.
Easley, David Milton.....Bluefield.
Evans, Mayross Rhemeses.....Glade Farms.
Egbert, Edgar Howard.....North Hector, N. Y.

Fairfax, Ralph Bernard.....Reedsville.
Filson, Edward Leslie.....Point Pleasant.
Finnell, Belle Vernon.....Keyser.
Fleming, Hugh Howell.....Fairmont.
Flowers, Frank Ernest.....Glover's Gap.
Frank, Harry Jules Louis.....Wheeling.
Frankenberger, Hugo.....Charleston.
Frazer, Leila Jessie.....Morgantown.
Fortney, John Marion Rogers.....Gladesville.
Forquer, James Clark McGrew.....Brandonville.
Freed, Arthur Preston.....New Haven, Pa.
Gainer, James Irvin.....Morgantown.
Gardner, Kenneth Clyde.....New Cumberland.
Garrison, Harry Alpheus.....Morgantown.
Gatewood, Massie Cameron.....Linwood.
Gibson, Clay Ashbel.....Tunnelton.
Gregg, Bessie Lee.....Morgantown.
Greynolds, Flora Centennial.....Beverly.
Guy, Robert Emmet.....Lewisburg.
Hayes, Jeannette Clements.....Morgantown.
Haymond, Ada.....Salem.
Hennen, Ray Vernon.....St. Cloud.
Hess, Frank Henry.....Point Pleasant.
Hess, Phila.....Buckhannon.
Hewitt, Frank Ready.....Bramwell.
Hewitt, John Davis, Jr.....Bramwell.
Holcomb, Harper Bruce.....Vinton, Ohio.
Holsberry, Leroy Virgil.....Meadowville.
Hodges, Marion Sackett.....Keyser.
Hopkins, Charles Lloyd.....Lloydsville.
Hopkins, Roy Samuel.....Morgantown.
Hubbard, Beulah Brock.....Morgantown.
Hughes, William Wellington.....Mineral.
Jennings, Maude Katharyne.....Morgantown.
Johnson, Edward Marshall.....Points.
Jones, Thomas Marshall Hood.....Morgantown.
Jolliffe, Frank Cowan.....Ringgold.
Kauffeld, Herman George Adolph.....Mt. Oliver, Pa.
Kelly, Mozell.....Addison
Kendall, Ramer Oscar.....Elkins.
Kendrick, William Henry.....Morgantown.
Koozer, Agatha.....Addison.
Leach, Fannie May.....Morgantown.
Lough, Myrtle.....Morgantown.
Lynn, Edna Hamilton.....Glenville.
Lowe, Scott Cephas.....Eldora.

Madera, Clarence Luther.....Scottdale, Pa.
Markley, Geo. Leland.....Junior.
Martin, Ella Hayes.....Cairo.
Martin, Bessie Katharine.....Morgantown.
Martin, Paul Heermans.....Morgantown.
Martin, William Gregory.....Shepherdstown.
McCormick, Josephine Pearl.....Morgantown.
McCormick, Eugene De La Pointe.....Morgantown.
McCrum, Arlington Bliss.....Aurora
McCullough, Charles Russell.....Point Pleasant.
McCune, Wm. McCausland.....Dawson, Pa.
McDonald, Jas. Wm., Jr.,.....Darkesville.
McGarvey, John.....Wheeling.
Meredith, Jas. Alva.....Alma.
Miller, Estelle May.....Morgantown.
Miller, Maude.....Alderson.
Moreland, Jas. Rogers.....Morgantown.
Morgan, Rembrandt.....Poca.
Morgan, Mary Elvira.....Gans, Pa.
Moore, Evaline.....Mannington.
Moore, John William.....Mannington.
Morrow, Harry.....West Newton, Pa.
Muldoon, Harry Ross.....Morgantown.
Murphy, Edward Everett.....Maidsville.
Neale, Chas. Beall Waggener.....Point Pleasant.
Neel, Isa Maud.....Pullman.
Nutter, Bessie.....Oxford.
O'Brien, Charles Gilbert.....Ripley.
Ong, William Irvine, Jr.....Morgantown.
Parks, Stella May.....Bula.
Parsons, Frances Anne.....Morgantown.
Pinkney, Harry Henry.....Montgomery.
Pollock, Wm. McCally.....Morgantown.
Porter, Archie McBride.....New Cumberland.
Pownall, Thomas Edwin.....Rio.
Provence, Millicent May.....Morgantown.
Prunty, Okey Johnson.....Berea.
Reinhart, Elza.....Alum Bridge.
Reitz, Lewis William.....Petroleum.
Rightmire, Byron Wesley.....Morgantown.
Robinson, John Stanislaus, Jr.....Smithton.
Rogers, D. Ray.....Jimtown.
Roller, Benjamin Richardson.....Charleston.
Ross, Minerva Emma.....Simpson.
Russell, James Garfield.....Smithton.
Schrader, Henry Maxwell.....Lubeck.

Sennett, Nora Belle.....Morgantown.
Sennett, Maude Saville.....Morgantown.
Sentz, Arthur Marie.....Spring Hill.
Shloss, Sidney.....Morgantown.
Shannon, Ida Janie.....Cairo.
Shuttleworth, Sammie Albert.....Little Falls.
Shuttleworth, Mary Catherine.....Little Falls.
Semmelman, Chas. Albert.....Nestorville.
Smith, Earl Harry.....Fairmont.
Smith, William Winfred.....Ceredo.
Smith, Jas. Henry.....Morgantown.
Smith, Frank Irene.....Martinsburg.
Smith, Vance.....West Union.
Snee, Wm. Jefferson.....Epton, Pa.
Sommerville, John Ferguson.....Lonaconing, Md.
Steele, Dunn Karl.....Keystone.
Stender, Leo Lawrence.....New Martinsville.
Steele, Frank Bailey.....Keystone.
Stewart, Myrtie Isabel.....Morgantown.
Stewart, Terence David Boston.....Charleston.
Stone, James Frederick.....Point Pleasant.
Straub, Aloysius Wentlen.....Cumberland, Md.
Swint, Chas. Patrick.....Weston.
Tait, Sara Cope.....Morgantown.
Thomas, Mary Ellenor.....Bula.
Thompson, Jas. Keith.....Morgantown.
VanGilder, Lida Edna.....Morgantown.
VanGilder, Lena.....Morgantown.
Walton, Wm. Karl.....Cameron.
Ward, Roy.....Auburn.
Warman, Russell McNanime.....Morgantown.
White, Edith Nina Miller.....Morgantown.
Wiles, Luther Young.....Morgantown.
Wilson, Edgar R.....Majorsville.
Wilson, Mary Augusta.....Morgantown.
Wilson, Virginia Farragut.....Morgantown.
Wilson, Okey Johnson.....Pennsboro.
Wilson, Georgia Clark.....Morgantown.
Winans, George Clark.....Washington, D. C.
Woolcock, Wilbur Thomas.....Edgarton.
Wood, Geo. Washington.....Morgantown.
Wood, Florence Arnold.....Morgantown.
Woodward, Henry Fry.....Charleston.
Woodward, Mayre Ruffner.....Charleston.

—188

The Preparatory School.

Fourth Year Students.

Auvil, Jesse Herbert.....Iaeger.
Bowman, Thomas Armstead Bradford.....Valley Furnace.
Bready, James Benjamin.....Berkeley Springs.
Cummins, John William.....Wheeling.
Dent, Herbert Warder.....Grafton.
Dorman, William Gibson.....New Cumberland.
Hughes, Rector Romeo.....Spencer.
Hervey, Henry Jacob.....Morgantown.
Jones, Arthur Paul.....Little Falls.
Kendrick, William Henry.....Morgantown.
Lemley, Gilbert Southey.....Mt. Morris, Pa.
Milligan, William George.....Wheeling.
Ong, Howard John.....Morgantown.
Rhoades, George Carroll.....Dallas.
Snyder, Earle Bailey.....Uniontown, Pa.
Stone, Jas. Frederick.....Point Pleasant.
Wilson, Mary Augusta.....Morgantown.
—17

Third Year Students.

Armstrong, Oscar Vance.....Beverly.
Arthur, Theodore Joseph.....Roscoe, Pa.
Baumgardner, Frank Gilbert Haven.....Palatine.
Boyers, Charles Forrest.....Randall.
Brown, Roscoe.....Clarksburg.
Buchanan, Joseph Kerr.....Morgantown.
Cain, Francis Marion.....Arnettsville.
Cazayoux, Frank.....New Roads, La.
Cole, Emmett Luther.....Morgantown.
DeGardeyn, William.....Pt. Marion, Pa.
Duty, Henry Price.....Pennsboro.
Embleton, Tennyson LeMoyne.....Charleston.
Flenniken, Fred Curl.....Carmichaels, Pa.
Forquer, James Clark McGrew.....Brandonville.
Hennen, Robert David.....Morgantown.
Hunter, George Washington.....Cheat Haven, Pa.
LeFevre, Edgar Brown.....Bunker Hill.
Lewis, John Clyde.....Grafton.
Lough, Maud.....Morgantown.
McMillen, Julius Ray.....Masontown.
McMillen, Russell Hennen.....Masontown.
Miller, Daniel Warren.....Dilliner, Pa.
Moore, Solomon Granville.....Belington.

Murphy, James Scott.....Morgantown.
Neale, Charles Beall Waggener.....Point Pleasant.
Ownby, Monroe.....Morgantown.
Parsons, Dickson Ward.....Morgantown.
Patterson, James Clarence.....Carmichaels, Pa.
Peck, MWood Crim.....Philippi.
Porter, Archibald McBride.....New Cumberland.
Ross, Justus J.....Simpson.
Sanders, Helen Maud.....Maidsville.
Smith, Bertha Jane.....Sistersville.
Trapnell, Richard Watkins.....Charles Town.
Willis, Annarie.....Bridgeport.
—35

Second Year Students.

Ashcraft, William Harrison.....Triune.
Barnes, Fred. Nelson.....Morgantown.
Baird, David Beach.....Wellsburg.
Bennett, Albert.....Morgantown.
Blose, Charles Wolton.....Delmont, Pa.
Buchanan, Margaret.....Morgantown.
Burchinal, Ira Grant.....Smithfield, Pa.
Carney, Samuel Clyde.....Littleton.
Carreau, Cyrille, Jr.....New York, N. Y.
Casto, Charles Everett.....Rockport.
Chancellor, Johnson Camden.....Parkersburg
Compton, Bertha Ellen.....Pedlar.
Crago, Ray.....Adah, Pa.
Cupett, David Earl.....Glade Farms.
Davis, Bruce.....Maidsville.
Dille, Maude Evans.....Morgantown.
Haymond, Thomas Wilson, Jr.....Cherry Camp.
Hall, Jesse Spurgin.....Morgantown.
Jackson, Winfield.....Gladesville.
Koblegard, Robert Rankin.....Clarksburg.
Koontz, James Andrew.....Morgantown.
Martin, Paul Heermans.....Morgantown.
McBee, Thomas Judson.....Halleck.
McCormick, Eugene De La Pointe.....Morgantown.
McDonald, James William, Jr.....Darksville.
Miller, Dana Paul.....Morgantown.
Miller, Wayne McCormick.....Dilliner, Pa.
Moore, Everett Blaine.....Orem.
Morgan, Charles, Jr.....Ringgold.
Morgan, Jesse Lee.....Gans, Pa.
Morrison, Don Leon.....Ripley.

Oliver, Alfred Cookman.....Morgantown.
Ownby, Frederick Hager.....Morgantown.
Parsons, Garrett William.....Romney.
Poe, Edgar Allen.....Kirt.
Rightmire, Edna.....Morgantown.
Ross, Charley Fordyce.....Simpson.
Ruble, William Jefferson.....Ruble, Pa.
Schaeffer, Bertha Blanche.....Brick Church, Pa.
Scott, Stanhope McClellan.....Terra Alta.
Tapp, Elizabeth Louise.....Morgantown.
Umbell, Isaac Walter.....Glade Farms.
Watson, Clyde Emil.....Kingwood.
Wyckoff, Ole Everett.....Grafton.
—44

First Year Students.

Ache, John Christian.....McClellandtown, Pa.
Agnew, Grace Estelle.....Morgantown.
Alexander, James Lawrence.....Fort Spring.
Babb, Haven Chester.....Medley.
Babb, Samuel Melvin.....Falls.
Bailey, Gertrude.....Morgantown.
Bartlett, Goedecke Marshall.....Simpson.
Bartlett, Tessa Hester.....Simpson.
Blair, Smith.....West Union.
Bower, Edwin Matthew.....Morgantown.
Brand, Franklin Marion.....Cassville.
Burgess, Muss Smucker.....Wayne.
Callaghan, Vincent DePaul.....Connellsville, Pa.
Campbell, George Howard.....Kasson.
Cartwright, Richard Eugene.....Scottdale, Pa.
Casey, Clyde John.....Morgantown.
Cather, Sallie.....Flemington.
Clarkson, Joseph Benjamin.....Etam.
Cohen, Harry Montvel.....Uniontown, Pa.
Cole, Frank McClaskey.....Grafton.
Cole, Odos Oscar.....Morgantown.
Collins, Ernest Harvey.....Berea.
Conrad, James Ballard.....Addison.
Corbin, Emmet Addis.....Ellenboro.
Corbin, Wade Hampton.....Ellenboro.
Core, Harry Russell.....Core.
Courtney, Crystal.....Randall.
Cowan, Elsie Morgan.....Morgantown.
Cox, Hugh Workman.....Morgantown.
Curry, Robert Bennett.....Addison.

Curtis, Kim Devant.....Morgantown.
Davis, James William.....Cairo.
Davis, Madge Belle.....Morgantown.
Dawson, Archibald.....Morgantown.
Dotson, James Porter.....Donohue.
Eddy, J. Luther.....Cross Roads.
Egbert, Edgar Howard.....North Hector, N. Y.
Ellison, Addison Dunlap.....Greenville.
Ellison, Charles Alexander.....Greenville.
Evans, Evan.....Greensboro, Pa.
Fairfax, Ralph Bernard.....Reedsville.
Filson, Edward Leslie.....Point Pleasant.
Fleming, Sara Rebecca.....Morgantown.
Flowers, Frank Ernest.....Glover's Gap.
Fortney, John Marion Rogers.....Gladesville.
Fortney, Willis Claudius.....Independence.
Franklin, James Russell.....Hundred.
Fravel, Mary Stewart.....Poca.
Freed, Arthur Preston.....New Haven, Pa.
Garner, Joshua Hite.....Cascara.
Gatewood, Massie Cameron.....Linwood.
Gibson, Clay Ashbel.....Tunnelton.
Goode, Joseph Smith.....Auburn.
Gregg, Bessie Lee.....Morgantown.
Headley, Joseph Clyde.....Whiteley, Pa.
Hewitt, John Davis, Jr.....Bramwell.
Hewitt, Frank Ready.....Bramwell.
Himmelright, C. Heinrich.....Capon Bridge.
Hopkins, Samuel Roy.....Morgantown.
Hopkins, Charles Lloyd.....Lloydsville.
Hopkins, Edwin Butcher.....Morgantown.
Hupp, Albert Everett.....Balls.
Ireland, Bassil Watts.....Morgantown.
Jackson, Winfield.....Gladesville.
Jones, Henry Francis.....Core.
Kauffeld, Herman George Adolph.....Mt. Oliver, Pa.
Kay, William Richard.....Nuttalburg.
Kincade, Lilian Virginia.....Point Pleasant.
Kincade, Cora Eleanor.....Point Pleasant.
Koozer, Agatha.....Addison.
Kramer, Claude Campbell.....Greensboro.
Lantz, Clarence Ivan.....Lone Star, Pa.
Lantz, James Morris.....Whitely, Pa.
Larew, James Edgar.....Red Sulphur Springs.
Lindsey, Allen Samuel.....Eby.
Madera, Clarence Luther.....Scottdale, Pa.

McBride, Marguerite.....Washington, D. C.
McConnell, Harry Kimple.....Sherrard.
McCreery, John Earl.....Beckley.
McGarvey, John.....Wheeling.
McMillen, Perry Wade.....Morgantown.
Miller, Peri Inez..... Dilliner, Pa.
Miller, Estelle May.....Morgantown.
Moore, John William.....Mannington.
Morrow, Harry.....West Newton, Pa.
Murphy, Edward Everett.....Maidsville.
Nethkin, Warder Reese.....Keyser.
Nestor, Ira Francis.....Auvil.
Norris, Edna Vernus.....Littleton.
O'Brien, Charles Gilbert.....Ripley.
O'Brien, Frederic William.....Williamson.
O'Hare, Joseph John.....Wheeling.
Ong, William Irvine, Jr.....Morgantown.
Parsons, Frank Alan.....Piedmont.
Pinkney, Harry Henry.....Montgomery.
Pixler, Walter Willie.....Morgantown.
Protzman, Earl Glenn.....Morgantown.
Provence, Hugh Gilmore.....Masontown, Pa.
Provence, Media Sophia.....Masontown, Pa.
Prunty, Okey Johnson.....Berea.
Pugh, Louther Brown.....Wymp's Gap, Pa.
Reiner, Elsie Maud.....Easton.
Reinhard, Elza A.....Alum Bridge.
Reitz, Lewis William.....Petroleum.
Ritter, Thomas Minter.....Bristol.
Robinson, John Stanislaus, Jr.....Smithfield.
Rogers, D. Ray.....Jimtown.
Rowland, Helen Doolittle.....Pittsburg, Pa.
Samples, William.....Cherry Camp.
Scott, Jesse Rinehart.....Waynesburg, Pa.
Semmelman, Charles Albert.....Nestorville.
Sentz, Arthur Marie.....Spring Hill.
Shuttleworth, Guy Allen.....Romine's Mills.
Shuttleworth, Sammie Albert.....Little Falls.
Smith, Lewis Oscar.....Hebron.
Smith, Vance.....West Union.
Somerville, George Greene.....Clifton.
Somerville, John Ferguson.....Lonaconing, Md.
Steele, Frank Bailey.....Keystone.
Steele, Dunn Karl.....Keystone.
Stewart, James Vance.....Morgantown.
Stewart, Myrtie Isabel.....Morgantown.

Tait, Sara Cope.....Morgantown.
Taylor, Everett Ray.....Morgantown.
Taylor, Shelby Ethbert.....Morgantown.
Teets, Doctor D.....Buckhannon.
Wamsley, Harold Webster.....Peet.
Ward, Emma.....Lee Bell.
Ward, Roy.....Auburn.
Warman, Guy.....Morris Cross Roads, Pa.
Warman, Russell McManime.....Morgantown.
Warman, Winnie.....Morgantown.
Wharton, Blanche.....Morgantown.
Whitham, Rachel Elizabeth.....Morgantown.
Wiles, Luther Young.....Morgantown.
Willis, Arthur Burton.....Boothesville.
Winans, George Clark.....Washington, D. C.
Wilson, Harry Edmond.....Viola.
Wilson, James Elmer.....Mannington.
Wilson, Okey Johnson.....Pennsboro.
Woodward, Henry Fry.....Charleston.
Woodward, Mayre Ruffner.....Charleston.
Woolcock, Wilbur Thomas.....Edgarton.
1899 – 1900 —143

The Department of Drawing and Painting.

Adams, Edith Hortense.....Ravenswood.
Arthur, Theodore Joseph.....Roscoe, Pa.
Auvil, Jesse Herbert.....Iaeger.
Atkeson, Karl Clark.....Buffalo.
Atkeson, Thomas Zephaniah.....Buffalo.
Bailey, Bruce.....Tyrconnell.
Bailey, Gertrude.....Morgantown.
Baird, Hallie Adella.....Elm Grove.
Barnes, Fred Nelson.....Morgantown.
Bennett, Albert.....Morgantown.
Bibbee, Charles Halsey.....Lorentz.
Blair, Smith.....West Union.
Boyers, Charles Forest.....Randall.
Brady, James Franklin.....Berkeley Springs.
Brown, Roscoe.....Clarksburg.
Buchanan, Joseph Kerr.....Morgantown.
Burns, David Fay.....Morgantown.
Burchinel, Ira Grant.....Smithfield, Pa.
Butterfield, Harry Cummings.....Brownsville, Pa.
Carreau, Cyrille, Jr.....New York, N. Y.
Cazayoux, Frank.....New Roads, La.
Chambers, Harriet Eva.....New Cumberland.

23

Clarkson, Joseph Benjaimin.....Etam.
Cobun, Linnie Belle.....Morgantown.
Cobun, Alice.....Morgantown.
Cole, Emmert Luther.....Morgantown.
Cole, Odos Oscar.....Morgantown.
Cole, Laura Sophia.....Morgantown.
Compton, Bertha Ellen.....Pedlar.
Cooper, William Jonathan.....Parkersburg.
Corbitt, Garland Crozier.....Waverly.
Courtney, Crystal.....Randall.
Cowan, Elsie.....Morgantown.
Crago, Eva Laura.....Wheeling.
Cruciger, Max Felix Otto.....Morgantown.
Cummins, John William.....Wheeling.
Dawson, Archibald.....Morgantown.
Davis, Bruce.....Maidsville.
Dent, Herbert Warder.....Grafton.
De Gardeyne, William.....Point Marion, Pa.
Dickey, Albert Ford.....Huntington.
Dille, Rachel Jane Hagans.....Morgantown.
Douthat, Dana.....Morgantown.
Deusenberry, Iona May.....North Hector, N. Y.
Egbert, Edgar Howard.....North Hector, N. Y.
Egbert, Ella Elizabeth.....North Hector, N. Y.
Ellison, Addison Dunlap.....Greenville.
Ellison, Charles Alexander.....Greenville.
Embleton, Tennyson Le Mayne.....Charleston.
Fairfax, Ralph Bernard.....Reedsville.
Filson, George Carl.....New Cumberland.
Findley, Ai Judson.....Mineral.
Flournoy, Harry Lightfoot.....Charleston.
Flenniken, Fred. Cure.....Carmichaels, Pa.
Forquer, James Clark McGrew.....Brandonville.
Freed, Arthur Preston.....New Haven, Pa.
Gibson, Clay Ashbel.....Tunnelton.
Grant, Hannah Elizabeth.....Morgantown.
Hackney, Blanche.....Morgantown.
Hagan, Dora Estelle.....Huntington.
Hallock, Albert Gibbs.....Wheeling.
Halstead, Ada Mae.....Kessler's Cross Lanes.
Harvey, William.....Frostburg, Md.
Hayes, Jeannette Clements.....Morgantown.
Hennen, Robert David.....Morgantown.
Herd, Virginia.....Morgantown.
Hervey, Henry Jacob.....Morgantown.
Hess, Frank Henry.....Point Pleasant.

46

Hewitt, Frank Reed.....Bramwell.
Hewitt, John Davis.....Bramwell.
Hoard, James Luther.....Hoard.
Hopkins, Charles Lloyd.....Lloydsville.
Hopkins, Louise.....Morgantown.
Hopkins, Samuel Roy.....Morgantown.
Howe, James Vance.....Morgantown.
Hunter, George Washington.....Cheat Haven, Pa.
Hupp, Albert Everett.....Balls.
Ireland, Addie Rosalie.....Morgantown.
Ireland, Emory Ison.....White Oak.
Jacob, Lillian.....West Liberty.
Jackson, Winfield.....Gladesville.
Johnson, Belle Wade.....Morgantown.
John, Daisy.....Morgantown.
Kincade, Lillian Virginia.....Point Pleasant.
Koontz, Lola Gertrude.....Kessler's Cross Lanes.
Koozer, Agatha.....Addison.
Kunkle, James Henry.....Morgantown.
Lantz, Clarence Ivan.....Fordyce, Pa.
Larew, James Edgar.....Red Sulphur Springs.
Leech, Fannie May.....Morgantown.
Lemley, Gilbert Southey.....Mount Morris, Pa.
Logan, Mary.....Penrith.
Lough, Myron Carleton.....Fairmont.
Lough, Maud.....Morgantown.
Lowe, Walter Loring.....Shinnston.
Martin, Mrs. Ella Hays.....Cairo.
McBride, Margaret.....Washington, D. C.
McBride, Douglass Banks.....Washington, D. C.
McConnell, Harry Kimple.....Sherrard.
McCormick, Josephine.....Morgantown.
McMurtrie, Robert Wells.....Latrobe, Pa.
McMillen, Russell Hennen.....Masontown.
McMillen, Jesse Vincent.....Dennison, Ohio.
Milligan, William Godfrey.....Wheeling.
Miller, Estella May.....Morgantown.
Miller, Frances Livermore.....Monongah.
Miller, Dana Paul.....Morgantown.
Moore, John William.....Mannington.
Moore, Phoebia.....Mannington.
Moore, Solomon Granville.....Belington.
Moore, Charles Larkins.....Brownsville, Pa.
Montoulieu y de la Torre, Eduardo.....Puerto Principe, Cuba.
Montoulieu y de la Torre, Enrique.....Puerto Principe, Cuba.
Murphy, James Scott.....Morgantown.

46

Neale, Charles Beall Waggener.....Point Pleasant.
Neel, Isa Maud.....Pullman.
Nelson, Martin Emmett.....Halleck.
Norris, Rebecca Lupton.....Glenville.
Ong, Howard John.....Morgantown.
Orr, Mary.....Roney's Point.
Parsons, Frances Anne.....Morgantown.
Patterson, James Clarence.....Carmichaels, Pa.
Patton, Benjamin Franklin.....Harrisville.
Peck, MWood Crim.....Philippi.
Porter, Archibald McBride.....New Cumberland.
Provence, Sophia Media.....Morgantown.
Provence, Nannie Emily.....Morgantown.
Provence, Lida Ethel.....Morgantown.
Reiner, Elsie Maud.....Easton.
Rightmire, Byron Wesley.....Morgantown.
Rightmire, Ina.....Morgantown.
Rightmire, Edna.....Morgantown.
Robinson, John Stanislaus, Jr.....Smithfield.
Rodgers, Raymond DeForest.....Jimtown.
Ross, John Gilmore.....Morgantown.
Ross, Minerva Emma.....Simpson.
Samples, William.....Cherry Camp.
Sanders, Mary Virginia.....Maidsville.
Schaeffer, Bertha Blanche.....Brick Church, Pa.
Scott, Stanhope McClellan.....Terra Alta.
Schrader, Henry Maxwell.....Lubeck.
Sennett, Nora Belle.....Morgantown.
Sentz, Arthur Marie.....Spring Hill.
Shannon, Ida.....Cairo.
Smith, Bertha Jane.....Sistersville.
Smith, Robley Tom.....Weston.
Smith, Earl Harry.....Fairmont.
Snider, Earl Bailey.....Uniontown.
Somerville, John Ferguson.....Farmington.
Stalnaker, Elizabeth Mattingly.....Martinsburg.
Stender, Lee Lawrence.....New Martinsville.
Stewart, James Vance.....Morgantown.
Tapp, Elizabeth Louise.....Morgantown.
Taylor, Everett Ray.....Morgantown.
Taylor, Shelby Ethbert.....Morgantown.
Taylor, Ernie Pearl.....Morgantown.
Taylor, Florence Naomi.....Holliday's Cove.
Teets, Dctor D.....Buckhannon.
Thurmond, Walter Rippetoe.....Thurmond.
Trapnell, Richard Watkins.....Charles Town.

46

Twigg, Wilbur Wisingford.....Davis.
Utt, Oranna Ellen.....Morgantown.
Walton, William Karl.....Cameron.
Wamsley, Harold Webster.....Valley Bend.
Warman, Winnie.....Morgantown.
Watson, George Thomas.....Fairmont.
Wells, Carrie Samantha.....Buffalo.
Whinery, Orland B.....Winona, Ohio.
White, Edith Nina Miller.....Morgantown.
Whitehill, Elizabeth Wilson.....Morgantown.
Whitham, Mary.....Valley Grove.
Wiles, Luther J.....Morgantown.
Willis, Jesse Joshua.....Bridgeport.
Willis, Floyd Templeton.....Bridgeport.
Willis, Arthur Burton.....Bridgeport.
Willis, Annarie.....Bridgeport.
Wilson, James Elmer.....Mannington.
Woodward, Henry Francis.....Charleston.
Woodward, Mayre Ruffner.....Charleston.
Woolcock, Wilbur Thomas.....Edgarton.
Wotring, Minnie Love.....Morgantown.
—181

The Department of Instruction by Correspondence.

Archer, J. W.....Cuba.
Arnold, Walter S.....Hartmonsville.
Ashcraft, William Harrison.....Triune.
Armstrong, Oscar Vance.....Beverly.
Ball, John Wesley.....Plymouth.
Baker, Drury.....Alderson.
Baker, E. S.....Bramwell.
Barnum, Eugene E.....Gaines, N. Y.
Bell, C. W., Jr.....Summersville.
Beeghly, E. Rutter.....Clifton Mills.
Bennett, Lawrence E.....Ireland.
Billings, Mary S.....Chicago, Ill.
Blackwood, Clay K.....Lock Seven.
Blanchard, George.....North Franklin, N. Y.
Bliss, Robert P.....Chester, Pa.
Boner, David.....Wells.
Brown, Irvin Carson.....Pleasant Valley.
Brown, Melville V.....Pliny.
Brown, Charles C.....Buffalo.
Burns, Thomas L.....Catawba.
Bunnel, John.....Hagerstown, Md.

Cleland, H. L.....Boothesville.
Colebank, Ora Octave.....Stewartstown.
Conley, George Washington.....Craigmoor.
Core, Minnie Leigh.....Mount Morris, Pa.
Correll, Harry D.....Lewisburg.
Cresap, Richard.....Wheeling.
Cross, W. J.....Uniontown.
Dayton, Edna B.....Remsenburg, L. I., N. Y.
DeBerry, Wesley.....Corinth.
Deffenbaugh, Walter S.....Smithfield, Pa.
Dodd, Samuel L.....Little Georgetown.
Eary, J. W.....Mulvane.
Easson, Thomas Chalmers.....Elkland, Pa.
Ebers, Charles Henry.....Benwood.
Eckerson, Sophia Hennion.....Mt. Vernon, N. Y.
Ellis, A. J.....Victor.
Engle, Alden.....Lloydsville.
Estlack, Walter F.....Philadelphia, Pa.
File, Ashton, Jr.....Mt. Hope.
Fish, Ada Y.....Dundee, N. Y.
Flett, George Custer.....Farmingdale, Ill.
Fortney, Willis.....Independence.
Fortney, Lorain.....Athens.
Freeland, Jas. W.....Metz.
Garvin, John D.....Charleston.
Gawthrop, Claude G.....Bridgeport.
Gibson, William Herbert.....Tunnelton.
Gilkeely, J. J.....Middle Fork.
Hall, G. W.....Peel Tree.
Haney, Oliver C.....Hall's Mills.
Harr, Levi Brooks.....Palatine.
Hastings, Horace L.....Fine, N. Y.
Haycock, Pasedas.....Jessy.
Heller, John.....Ona.
Heller, Lewis.....Ona.
Heslen, F. C.....Augusta, Ga.
Heinzel, Henry.....Hudson, Wis.
Hoff, Eri B.....Newark.
Horn, E. W.....Ripley.
Hoard, James Luther.....Hoard.
Howard, Lester.....Standfordville, N. Y.
Hays, Howell.....Clements.
Hughes, H. B.....Spencer.
Hykes, J. A.....Tipton.
Jackson, M. A.....Lewisburg.
Johnson, J. W.....Alderson.

Kiger, R. A. ..... Sherrard.
King, L. E. ..... Kedron.
Kuhl, Christian ..... Cedarville.
Late, G. B. ..... Bridgeport.
Lazelle, Neta Blanche ..... Ramsey, S. C.
Leatherman, George ..... Old Fields.
Legg, A. J. ..... Albion.
Lewis, C. E. ..... Savanah.
Looney, John W. ..... Looneyville.
Lang, E. D. ..... Oak Ridge, Mo.
Lowary, Margaret McKnight ..... New Brighton, Pa.
Manley, R. T. ..... Fairmont.
McDonaugh, P. C. ..... Dombey.
McDonald, W. T. ..... Charles Town.
McDonald, Mary A. ..... Charles Town.
McNeill, Samuel H. ..... Mercer's Bottom.
McFarlan, Ellis ..... New Bedford, Pa.
McIntosh, Elizabeth Crr ..... Parkersburg.
Meadows, A. M. ..... Lerona.
Miller, Edmund D. ..... Vanderbilt, Pa.
Miller, Bertus ..... Tunnelton.
Minter, W. F. ..... Victor.
Morris, Will E. ..... Clarksburg.
Naylor, L. G. ..... Lockhart.
Norris, Robert B. ..... Sutton.
Norris, Rebecca L. ..... Morgantown.
Nutter, E. J. ..... Clarksburg.
Nuzum, John ..... Glenville.
Oshee, V. S. ..... Grimm's Landing.
Parsons, T. J. C. ..... Rockcastle.
Peery, Kent E. ..... Longwood, Va.
Perkins, S. C. ..... Fairfield Center, Ind.
Postlehwait, Wm. Jackson ..... New Martinsville.
Prevatt, J. Bry ..... Levyville, Fla.
Prickett, Lawrence A. ..... Barricksville.
Prichard, John Guy ..... Rivesville.
Provence, Millicent ..... Morgantown.
Provence, Nanna Emilie ..... Morgantown.
Richards, Edgar U. ..... New Cumberland.
Richardson, J. N. ..... Pruntytown.
Richardson, Jessie E. ..... Newport, Ky.
Rose, Herschel Hampton ..... Mannington.
Sayre, Theodore J. ..... Angerona.
Schriver, F. E. ..... Marseilles, Ohio.
Shaw, O. Y. ..... Rockville.
See, Arthur ..... Piedmont.

Shutt, Logan B.....Kabletown.
Slagle, W. C.....Graysville.
Smith, Lee.....Uniontown, Pa.
Smith, Z. E.....Kerns.
Smith, Frank Orvil.....Bridgeport.
Sounedicker, ———.....Tiffin, Ohio.
Starling, E. F.....Cairo.
Stenger, Anthony Nicholas.....Seneca.
Switzer, E. C.....Spencer.
Thomas, Seth.....Mason.
Townsend, R. A.....Laclede.
Turner, Bird M.....Moundsville.
Ulrich, John.....Brooklyn, N. Y.
Ward, Ida.....Richmond, N. Y.
Waring, James Cash.....Santee, S. C.
Waters, C. H.....Laurel Point.
Wells, A. L.....Philippi.
West, James Bruce.....Logansport.
Whinery, Thos. R.....Winona, Ohio.
Whitehead, Wm. S.....South Side.
Williams, Charles Richard.....Washington, D. C.
Wilson, L. F.....Gerrardstown.
Winans, Geo. Clark.....Washington, D. C.
Wolaver, Erwin David.....Elgin, Ill.
Wolfhope, Frank A.....Cumberland, Md.
Wright, Mattie.....Uniontown, Pa.
Yoho, J. W.....Cameron.
Zimmerman, Adam.....Robertsville, Ohio.
—141

Summary of Students.

Graduate Students		41
College of Arts and Sciences:		
Seniors	54	
Juniors	42	
Sophomores	36	
Freshmen	35	
Premedical Students	10	
Special Students	119	
Total number of undergraduates in College of Arts and Sciences		296
College of Engineering and Mechanic Arts:		
Seniors	6	
Juniors	10	

Sophomores	12	
Freshmen	9	
Specials	15	
Total number of students in College of Engineering and Mechanic Arts		52
College of Agriculture:		
Graduate Students	3	
Seniors	2	
Sophomore	1	
Freshmen	4	
Specials	22	
Total number of students in College of Agriculture		32
College of Law:		
Seniors	27	
Juniors	94	
Total number of students in College of Law		121
School of Music:		
Vocal	21	
Piano	95	
Violin	32	
Cornet	1	
Harmony	6	
Banjo	6	
Mandolin	39	
Guitar	42	
Total number of students in the School of Music		242
Department of Drawing and Painting		181
Commercial School		188
The Preparatory School at Morgantown:		
Fourth year	17	
Third year	35	
Second year	44	
First year	143	
Total number of students in Preparatory School at Morgantown		239

Total enrollment of students at Morgantown	1391
Total counted more than once	506
Total number of students at Morgantown	885
Total number last year	815
Increase	70
Total number of students receiving instruction in residence	885
Students receiving instruction from Morgantown by Correspondence	141
Total number of students receiving instruction	1026

Summary of Students by States and Countries.

Resident Students at Morgantown.

West Virginia	759
Pennsylvania	88
Ohio,	7
New York	7
District of Columbia	4
Virginia	3
Maryland	3
Indiana	2
Minnesota	2
Cuba	2
Louisiana	1
New Jersey	1
Illinois	1
Wisconsin	1
Idaho	1
Washington	1
Montana	1
Massachusetts	1
Total	885

Correspondence Students.

West Virginia	101
Pennsylvania	10
New York	9
Ohio	4
Illinois	3
Maryland	2
District of Columbia	2
South Carolina	2

Virginia	1
Florida	1
Kentucky	1
Missouri	1
Georgia	1
Indiana	1
Wisconsin	1
Cuba	1
Total	141

Degrees Conferred in 1899.

Master of Arts.

Herbert Henry Moninger, Orilas Grant White,
Daniel Webster Ohern.

Bachelor of Arts.

Clyde Davis Barbe,
George Morris Beltzhoover, Jr.,
Clarence Emmett Berkshire,
Alexander Lough Eddy,
Francis Aloysius Hauber,
James William Horn,
Paul Stewart Hunter,
Benjamin Franklin Laughlin,
William McCally Pollock,
Alexander Pickens Romine,
Lucy Berkshire Wood,
Robert Morris.

Bachelor of Science.

George Robert Krebs, William Henry Whitham.

Bachelor of Philosophy.

Charles Fenton Holden, James Marshall Skinner.

Bachelor of Science in Civil Engineering.

Jacob Julius Abersold,
Floyd Neely Frum,
Paul Evans Green,
Lee Lewellen,
Charles Henry Quimby, Jr.,
Alexander Gordon Tait,
Philip Konrad.

Bachelor of Science in Mechanical Engineering.

George Edgar Gramm.

Bachelor of Science in Agriculture.

William Frazier Naret.

Bachelor of Agriculture.

Thomas Zaphaniah Atkeson.

Bachelor of Arts in Law.

Edward Blackburn Carskadon,
James Edman Law,
Henry Middleton White,
Charles Washington Sample,
Archie Leroy Sawtell.

Bachelor of Laws.

George Edward Anderson,
James Estill Brown,
Thomas Jeffrey Davis,
Edward Gregg Donley,
Harry Keller Drane,
Richard Parke Flournoy,
James Carroll Frazer,
John L. Hatfield,
Robert Roy Hodge,
Carl Kelley Jacob,
Ward Baker Lindsay,
Isaac Mansbach,
John Franklin Maynard,
Robert Hamilton Miller,
Lucian Euraw Poteet,
James G. Thomas,
Robert White,
Dennis Martin Willis,
George FrankBoyd,
Coleman Hall Bush,
Lee Filmore Dobbs,
William Walton Downey,
Hugh Abla Dunn,
Fred Lee Fox,
Leila Jessie Frazer,
Francis Aloysius Hauber,
Marion Sackett Horner,
WilliamGrant Kennedy,
Rob Roy McGregor,
Clarence Eugene Martin,
John Henry Meek,
Robert Morris,
John E. Bell Sweeny,
Richard Adams Welch,
Lilian Ruth Wiles,
Willis Curtis Willis.

INDEX.

A.B.-Medical Course.....92, 93, 94, 95, 96, 97
A.B.-Medical Course Schedule.....95, 96
A.B.-Medical Course, Preparatory Schedule.....93, 94
Accredited Preparatory Schools..... 40
Admission Conditions 45
Admission and Advanced Standing, Committee on..... 52
Admission to Special Courses in Engineering.....113
Admission to Advanced Courses in Engineering.....113
Admission on Certificate..... 47
Admission, Requirements for:
College of Agriculture.....141, 142, 146
College of Arts and Sciences.....45, 46
College of Law.....157, 158
Commercial School.....176
Domestic Science Course.....103, 104
Engineering Courses.....112
Medical Course..... 93
Preparatory School.....183
Advanced Standing in College of Law.....159
Advanced Standing..... 52
Advanced Standing in Preparatory School.....183
Advantages of University Law Course.....164
Agricultural Experiment Station Staff.....19, 155
Agricultural Chemistry, Instruction in.....151
Agricultural Society.....26, 152
Agriculture, College of.....140-154
Agricultural Home Reading Course.....152, 153, 154
Agriculture, Instruction in.....147, 148
Algebra, Preparatory, Instruction in.....190
Anatomy, Instruction in..... 87
Anglo-Saxon, Instruction in..... 72
Announcements, School of Music.....173
Anthropology, Instruction in..... 57
Approved Boarding and Rooming Places..... 40
Art Course.....108
Astronomy, Instruction in..... 78
Athletics..... 26

Athletic Association..... 26
Atkinson Prizes..... 34
Aurora Grange Prize..... 34
Bachelor of Arts, Degree of..... 48
Bachelor of Arts in Law, Degree of.....159
Bachelor of Arts with Law as Major, Degree of.....160
Bachelor of Laws, Degree of.....159
Bachelor of Science in Agriculture, Degree of.....142, 143
Bachelor of Science in Mechanical Engineering, Degree of.....119
Bacteriology, Instruction in.....178
Banjo, Instruction on.....172
Bar Examinations.....164
Biology, Equipment 24
Board of Regents..... 9
Boarding and Rooming Places, Approved..... 40
Board and Lodging..... 39
Bookkeeping, Instruction in.....178
Botany, Economic.....151
Botany, Equipment..... 24
Botany, Instruction in.....90, 91
Botany, Preparatory, Instruction in.....191
Buildings 21
Building and Equipment, School of Music.....168
Chapel 37
Chemistry, Agricultural, Instruction in.....151
Chemistry, Equipment 23
Chemistry, Instruction in.....80, 81, 82
Choral Society 26
Church Halls 37
Civil Engineering, Equipment..... 25
Civil and Mining Engineering, Instruction in.....128, 129
Classification and Promotion..... 50
Columbian Literary Society..... 26
Committee on Admission and Advanced Standing..... 52
Commercial Geography and History.....181
Commercial School, Equipment..... 25
Commercial School, Staff of Instruction.....175
Commercial Law.....180
Conditions of Awarding Essay Prizes..... 32
Correspondence, Instruction by.....197-203
Dayton Prize in Domestic Science..... 34
Degrees Conferred.....248, 249
Degrees, Requirements for:
  In College of Arts and Sciences..... 48
  In Civil Engineering.....116, 117

In Mechanical Engineering....119
In College of Agriculture....143, 145
In College of Law....158, 159, 160
Description of Engineering Courses....114, 115
Description of Law Courses....161
Departmental Equipments 23
Discipline 36
Doctor of Philosophy, Degree of.... 49
Domestic Science....102
Domestic Science, Instruction in....103
Domestic Science Course....105
Drawing, Instruction in....106, 107
Economics, Instruction in....58, 59, 60
Elocution, Instruction in....76, 77
Elkins Prizes in Greek.... 33
Engineering Society....26, 127
English, Instruction in....72, 73, 74, 75, 76, 77
English, Preparatory 186
Engineering and Mechanic Arts, College of....109-139
Engineering Electives....122, 123, 124
Entomology, Economic 151
Entomology, Equipment 24
Entrance Examinations 46
Episcopal Hall 37
Ethnology, Instruction in.... 57
Examinations for Admission to the Bar....164
Examinations, Quarterly.... 52
Expenses, College of Agriculture....141
Expenses 39
Faculties, Members of.... 10
Faculty of College of Arts and Sciences.... 44
Faculty of School of Music....169
Faculty of Commercial School....175
Faculty of College of Engineering and Mechanic Arts....109
Fees 39
Fees, Laboratory 89
Fees, Commercial School....176
Fellowships 35
Fine Arts....106
Free Advantages, School of Music....170
French, Instruction in.... 67
French, Preparatory 188
Funds 21
Geology, Equipment 23
Geology, Instruction in.... 82

Geometry, Preparatory, Instruction in.....191
German, Instruction in.....70, 71, 72
German, Preparatory, Instruction in.....189
Grades and Standing..... 51
Graduate Courses in Engineering.....116, 126
Greek, Instruction in.....64, 65
Greek, Preparatory, Instruction in.....187
Guitar, Instruction on.....172
Gymnasium, Equipment..... 25
Harmony, Instruction in.....173
History of Art.....107
History, Instruction in.....62, 63, 64
Histology, Instruction in..... 88
History, Preparatory.....189
Horticulture and Forestry, Instruction in.....149, 150
Inter-Society Prizes..... 30
Instruction by Correspondence.....197, 198, 199
Journal Clubs..... 96
Laboratory Fees..... 89
Latin, Instruction in.....65, 66
Latin, Preparatory.....186
Law, Instruction in.....161, 162, 163
Law, College of.....157
Law Library.....164
Lectures, Special..... 37
Lectures, Synoptic.....36, 89
Library, Agricultural Experiment Station.....152
Library, Staff of..... 19
Library, University..... 42
Mandolin, Instruction on.....172
Manual Training Courses.....121
Master of Arts, Degree of..... 48
Master of Laws, Degree of.....160
Materia Medica, Instruction in.....88, 89
Mathematics, Instruction in.....77, 78
Mathematics, Preparatory, Instruction in.....190
Maximum Work..... 51
Mechanical Engineering, Undergraduate Course in.....118
Mechanical Engineering and the Mechanic Arts, Instruction in.....131, 132, 133, 134, 135, 136
Mechanics and Applied Mathematics, Instruction in....137, 138, 139
Medicine..... 92
Military Department.....193, 194
Ministry, Special Course for Candidates for..... 38
Mineralogy, Instruction in.....190

Montgomery, Staff of Preparatory School at..... 19
Moot Courts.....165
Music, Credit for.....168
Organ, Instruction on.....171
Organization..... 20
Origin and Location..... 20
Painting, Instruction in.....107
Parthenon Literary Society..... 26
Pathology, Instruction in..... 88
Pedagogy, Instruction in.....55, 56
Penmanship, Instruction in.....179
Pharmacy, Instruction in.....98, 99, 100, 101
Pharmacy Course.....99, 100
Pharmacognosy.....100
Philosophy, Instruction in.....53, 54
Physics, Equipments..... 23
Physics, Instruction in.....78, 79, 80
Physics, Preparatory, Instruction in.....191
Physiology, Instruction in.....87, 88
Physiology, Preparatory, Instruction in.....191
Physical Geography, Preparatory, Instruction in.....191
Physical Training, Department of.....195, 196
Piano, Instruction on.....170
Political Science, Instruction in.....60, 61
Preparatory School at Montgomery.....192
Preparatory School at Morgantown.....182
Preparatory Schedule.....184
Prizes, Conditions of Awarding Essay..... 32
Prizes..... 28
Quarterly Examinations..... 52
Recitals.....169
Removal of Conditions..... 51
Requirements for Two Years Commercial Course..... 177
Requirements for Engineering Courses.....116, 117
Requirements for Diploma and Certificate, School of Music.....168
Rhetoric, Instruction in.....74, 75
Rules and Regulations, Special..... 50
Schedules:
  Four Year Preparatory Course.....184
  Three Year Preparatory Course.....185
  Engineering Courses.....112, 113, 117, 118
  Courses for degree of B.S.M.E.....120
  Courses for Mechanical Engineering Certificate.....125
  Courses in College of Agriculture.....144, 145, 146
School of Music.....167

School of Music, Tuition.....169
Sociology, Instruction in.....57, 58
Scott Prize in Declamation..... 29
Shorthand, Instruction in.....179
Societies..... 26
Spanish, Instruction in..... 69
Special Lectures..... 37
Special Rules and Regulations..... 50
Special Students.....126, 127, 159
Students.....230-247
Synoptic Lectures.....36, 89
Text Books in Law.....136
Theses.....27, 126, 152
Thompson, Edward, Company, Prize in Law..... 31
Thompson, James F., Prize in Anatomy and Physiology..... 33
Thompson, James O., Prize in English..... 34
Tuition, School of Music.....169
Two Years Civil and Mining Engineering Certificate Course.....118
Two Years Mechanical, Electrical, and Civil Engineering Certificate Course.....114
Typewriting, Instruction in.....180
Veterinary Science, Instruction in.....150
Violin, Instruction on.....172
Vocal Music, Instruction in.....171
West Virginia Society of Science, Arts and Letters..... 26
Wiles Prizes in Oratory..... 28
Woman's Christian Temperance Union Prize..... 32
Wood and Brass Wind Instruments, Instruction on.....172
Young Men's Christian Association..... 26
Young Women's Christian Association..... 26
Zoölogy, Instruction in.....83, 84, 85, 86

West Virginia University,
MORGANTOWN, W. VA.

REQUIREMENTS

FOR

ADMISSION TO THE COURSES

OFFERED

BY THE UNIVERSITY.

REQUIREMENTS FOR ADMISSION TO THE COURSES LEADING TO THE VARIOUS DEGREES OFFERED BY THE UNIVERSITY.

Candidates for admission must be at least fifteen years of age, and must present satisfactory evidence of good moral character. They must bring credentials from their last instructor, or from the last institution with which they were connected.

Graduates from the academic courses of the state normal schools, from approved high schools and preparatory schools, will be admitted without further examination, and permitted to enter upon such under-graduate work as the preparatory studies contemplated.

The University will honor the diplomas and certificates of those preparatory schools only which conform their work to the requirements herein set forth.

Unless admitted on diploma or certificate, every undergraduate candidate for a degree from West Virginia University is, before entering College, required to pass examination upon the subjects set forth in this pamphlet as preparatory to the course which he has chosen.

FOR THE YEAR 1898.

The Degree of Bachelor of Arts.

In 1898 the subjects on which applicants for admission to the *Classical Course* must be prepared, will be as follows:

1. History.

(a) General History,—Myers, or an equivalent.

(b) United States History,—Fiske, or an equivalent.

2. English.

(a) Spelling, punctuation, capitalization and paragraphing.

(b) The leading facts of English grammar.

(c) Composition—ability to write good English.

(d) Literature.

Part I. Reading.—A certain number of books are set for reading.

The candidate will be required to present evidence of a general knowledge of the subjectmatter, and to answer simple questions on the lives of the authors. The form of examination will usually be the writing of a paragraph or two on each of several topics, to be chosen by the candidate from a considerable number—perhaps ten or fifteen—set before him in the examination paper. The treatment of these topics is designed to test the candidate's power of clear and accurate expression, and will call for only a general knowledge of the substance of the books. In place of a part or the whole of this test, the candidate may present an exercise book, properly certified by his instructor, containing compositions or other written work done in connection with the reading of the books.

The following are the books for 1898:

Milton's Paradise Lost (Books I. and II.), Pope's Iliad (Books I. and XXII.), the Sir Roger de Coverly Papers in The Spectator, Goldsmith's The Vicar of Wakefield, Coleridge's Ancient Mariner, Southey's Life of Nelson, Carlyle's Essay on Burns, Lowell's Vision of Sir Launfal, Hawthorne's The House of Seven Gables.

Part II. Study and Practice.—This part of the examination pre-supposes the thorough study of each of the works named below. The examination will be upon subject matter, form and structure.

The books for this part of the examination for 1898 will be:

Shakespeare's Macbeth, Burke's Speech on Conciliation with America, De Quincey's Revolt of the Tartars, Tennyson's The Princess.

3. Mathematics.

(a) Arithmetic completed.
(b) Algebra to Logarithms,—Wells' University Algebra, or an equivalent.
(c) Plane Geometry,—Wells, or an equivalent.

4. Elementary Science.

(a) Physical Geography.
(b) Human Anatomy and Physiology.
(c) Physics.
(d) Botany.

The course in each to be not less than one term of twelve weeks, five recitations a week.

5. Latin.

(a) Grammar and Elementary Book,—Chase and Stuart, or an equivalent.
(b) Cæsar,—one book.
(c) Cicero,—three orations.
(d) Virgil,—one book of the Æneid.

Two years of daily recitations should be given to this preparatory work in Latin.

6. Greek.

(a) White's First Greek Book, or an equivalent.

(b) Prose Composition.

(c) Xenophon's Anabasis,—first book

One year of daily recitations should be given to this preparatory work in Greek.

The Degrees of Bachelor of Science, Bachelor of Science in Civil Engineering, Bachelor of Science in Mechanical Engineering, Bachelor of Science in Agriculture.

In 1898 the requirements for admission to the various *Scientific Courses* will be as given below.

(1) **History,** (2) **English,** (3) **Mathematics,** (4) **Elementary Science, and** (5) **Latin,** as required for admission to the course leading to the degree of *Bachelor of Arts.*

6. French or German.

French.

(a) Whitney's or Edgren's Grammar, Super's or Whitney's Reader.

(b) Halevy's L'Abbe Constantin, or selections from modern authors; or,

German.

(a) Joynes-Messner's or Thomas's Grammar, Joynes' or Harris's Reader.

(b) Schiller's Jungfrau von Orleans, or other selections.

One year of daily recitations should be given to this preparatory work in French or German.

7. Drawing.

One exercise a week throughout one year.

The Degree of Bachelor of Philosophy.

In 1898 the requirements for admission to the *Philosophical Course* will be as follows:

(1) **History,** (2) **English,** (3) **Mathematics,** (4) **Elementary Science,** as required for the course leading to the degree of *Bachelor of Arts.*

5. Latin or Greek.

The candidate may choose between these languages.

offering as much preparatory work in the one chosen as is required for the course leading to the degree of *Bachelor of Arts*, that is, one year of Greek, or two years of Latin.

6. French or German.

If the candidate for admission to this course presents one year of Greek, he must present two years of French or German; or, if he presents two years of Latin, he must present one year of French or German. However, the candidate may, if he so choose, offer both Latin and Greek, in which case there shall be no modern language requirement.

The Degree of Bachelor of Letters.

In 1898 the requirements for admission to the *Modern Literature Course* will be as given below.

(1) **History,** (2) **English,** (3) **Mathematics,** (4) **Elementary Science,** as required for the course leading to the degree of *Bachelor of Arts.*

5. French or German.

Three years of French or German, or three years of French and German will be required. This requirement in *foreign language* may be satisfied by three years made up in whole or in part of Latin and Greek.

Students who have not had opportunity of making the preparation in *modern languages* necessary to be admitted to the courses having entrance requirements in these languages, may be admitted conditionally to the freshman class in such courses and be allowed to make up this preparatory work in the University classes.

The Degree of Bachelor of Agriculture.

In 1898 the requirements for admission to the course leading to the degree of *Bachelor of Agriculture* will be as follows:

(1) **History,** (2) **English,** (3) **Mathematics,** (4) **Elementary Science,** as required for the course leading to the degree of *Bachelor of Arts.*

5. Elementary Agriculture and Horticulture.

This work is to be taken in the place of the *foreign languages* required for admission to other courses.

The Degree of Bachelor of Laws.

"A student who has mastered the academic branches taught in the high schools, or normal schools, or the preparatory department of the University, and has reached such an age and made such attainments in general education as shall satisfy the Law Faculty, after examination, that he can creditably enter upon the practice of law when his legal studies are completed, may be admitted as a candidate for the degree offered in the Law College."

FOR THE YEAR 1899.

The Degree of Bachelor of Arts.

In 1899 the subjects on which applicants for admission to the *Classical Course* will be examined, will be as follows:

1. History.

(a) General History,—Myers, or an equivalent.

(b) United States History—Fiske, or an equivalent.

2. English.

The requirements in English will be the same in general as described above for the year 1898, except that the books for reading, and for study and practice will be as follows:

Part I. Reading.—Dryden's Palamon and Arcite, Pope's Iliad (Books I., VI., XXII., and XXIV.), the Sir Roger de Coverly Papers in The Spectator, Goldsmith's The Vicar of Wakefield, Coleridge's The Ancient Mariner, De Quincey's The Flight of a Tartar Tribe, Cooper's The Last of the Mohicans, Lowell's The Vision of Sir Launfal, Hawthorne's The House of Seven Gables.

Part II. Study and Practice.—Shakespeare's Macbeth, Milton's Paradise Lost (Books I. and II.), Burke's Speech on Conciliation with America, and Carlyle's Essay on Burns.

3. Mathematics.

(a) Arithmetic completed.

(b) Algebra to Logarithms,—Wells' University Algebra, or an equivalent.

(c) Plane Geometry,—Wells, or an equivalent.

4. **Elementary Science.**

(a) Physical Geography.
(b) Human Anatomy and Physiology.
(c) Physics.
(d) Botany.

The course in each shall be not less than one term of twelve weeks, five recitations a week.

5. **Latin.**

(a) Grammar and Elementary Book—Chase and Stuart, or an equivalent.
(b) Cæsar,—four books.
(c) Cicero,—five orations.
(d) Virgil,—six books.

Three years of daily recitations should be given to this preparatory work in Latin.

6. **Greek.**

(a) White's First Book, or an equivalent.
(b) Xenophon's Anabasis,—four books.
(c) Homer's Iliad,—three books.
(d) Prose Composition,—one year.

Two years of daily recitations should be given to this preparatory work in Greek.

The Degrees of Bachelor of Science, Bachelor of Science in Civil Engineering, Bachelor of Science in Mechanical Engineering, Bachelor of Science in Agriculture.

In 1899 the requirements for admission to the *Scientific Courses* will be as given below.

(1) **History,** (2) **English,** (3) **Mathematics,** (4) **Elementary Science,** and (5) **Latin,** as required (1899) for admission to the course leading to the degree of *Bachelor of Arts.*

5. **French or German.**

Two years of French or German will be required for admission to this course—two years of daily recitations.

6. **Drawing.**

One exercise a week throughout one year.

The Degree of Bachelor of Philosophy.

In 1899 the requirements for admission to the *Philosophical Course* will be as follows:

(1) **History,** (2) **English,** (3) **Mathematics,** (4) **Elementary Science,** as required (1899) for admission to the course leading to the degree of *Bachelor of Arts.*

5. Latin or Greek.

The requirement in *ancient language* may be satisfied by (1) three years of Latin, or (2) two years of Greek.

6. French or German.

The candidate who presents three years of Latin must present also two years of French or German, and the candidate who presents two years of Greek must present also three years of French or German.

A year's work, it is always understood, consists of five recitations a week throughout the year.

The Degree of Bachelor of Letters.

In 1899 the requirements for admission to the *Modern Literature Course* will be as given below.

(1) **History,** (2) **English,** (3) **Mathematics,** (4) **Elementary Science,** as required (1899) for admission to the course leading to the degree of *Bachelor of Arts.*

5. French and German.

The requirement in *foreign language* may be satisfied by (1) three years of Latin and two years of Greek; (2) three years of Latin and two years of French or German; (3) two years of Greek and two years of French or German; (4) two years of French and two years of German.

Students who have not had opportunity of making the preparation in *modern languages* necessary to be admitted to the courses having entrance requirements in these languages, may be admitted conditionally to the freshman class in such courses and be allowed to make up this preparatory work in the University classes.

The Degree of Bachelor of Agriculture.

In 1899 the requirements for admission to the course leading to the degree of *Bachelor of Agriculture*, will be as follows:

(1) **History,** (2) **English,** (3) **Mathematics,** (4) **Elementary Science,** as required (1899) for the course leading to the degree of *Bachelor of Arts.*

5. Elementary Agriculture and Horticulture.

This work is to be taken in the place of the *foreign languages* required for admission to other courses.

FOR THE YEAR 1900.

In 1900, and thereafter, the requirements for admission to the various courses will be as before described for the year 1899, except that Solid Geometry will be added to the requirements in Mathematics.

Admission to Special Courses.

Young men under twenty-one years of age, desiring to take special courses, are required to present the same qualifications as candidates for one of the regular courses. Young men twenty-one years of age or over, and young women over fifteen years of age, who are not candidates for a degree and who wish to take special studies, will be permitted to do so upon giving satisfactory evidence that they are prepared to take the desired studies advantageously. If they subsequently desire to become candidates for a degree or to take a regular course, they must pass the required entrance examinations.

University Bulletin. Series 1, No. 4.

Issued Quarterly.

Entered at the Postoffice at Morgantown, West Virginia
as Second Class Matter.

West Virginia University

MORGANTOWN, W. VA.

CATALOGUE

1900-1901.

ANNOUNCEMENTS

1901-1902.

MORGANTOWN, W. VA.
PUBLISHED BY THE UNIVERSITY.

West Virginia University

MORGANTOWN, W. VA.

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CONTENTS.

	Page.
Calendar	7
Board of Regents	8
Officers of Instruction	9
Agricultural Experiment Station Staff	16
University Organization	18
Buildings	19
Departmental Equipments	21
Athletics	25, 51
Central Oratorical League	25
Societies	26
Theses	27
Prizes	27
Fellowships	34
Chapel Exercises	35
Church Halls	35
Fees and Expenses	36
Accredited Preparatory Schools	37
Library	40
College of Arts and Sciences	42
Entrance Requirements	45

Page.
Degrees.....46, 100, 123, 139
Special Rules and Regulations..... 49
College of Medicine..... 89
Pharmacy 90
Fine Arts 93
College of Engineering and Mechanic Arts..... 96
College of Agriculture..... 122
Agricultural Experiment Station..... 135
College of Law..... 137
School of Music..... 147
Commercial School 155
Preparatory Schools 162
Military Department 172
Physical Training 176
Instruction by Correspondence..... 176
Catalogue of Students..... 177
Degrees Conferred in 1900..... 213

CALENDAR:

1901.

September 16, Monday.....Fall Quarter Begins
September 16, 17, 18, Monday, Tuesday and Wednesday.....
..... Entrance Examinations
September 17 and 18, Tuesday and Wednesday.....
.....Matriculation and Registration of Students
September 18, Wednesday, 7:30 P. M.....Fall Convocation
September 19, Thursday.....Recitations of Fall Quarter Begin
November 28, Thursday, to December 1, Monday inclusive....
..... Thanksgiving Recess
December 11, Wednesday.....Last Recitations of Fall Quarter
December 12, Thursday, to December 14, Saturday, inclusive...
.....Final Examinations of Fall Quarter
December 14, Saturday.....Fall Quarter Ends
December 15, Sunday, to January 1, 1902, inclusive.....
....Quarterly Recess

1902.

January 2, Thursday.....Winter Quarter Begins
January 2, Thursday, 7:30 P. M.....Quarterly Convocation
January 3, Friday.....First Recitations of Winter Quarter
February 22, Saturday.....Washington's Birthday; a holiday
March 18, Thursday.....Last Recitations of Winter Quarter
March 19, Wednesday, to March 22, inclusive.....
.....Final Examinations of Winter Quarter
March 22, Saturday.....Winter Quarter Ends
March 23, Sunday, to March 31, Monday.....Quarterly Recess
April 1, Tuesday.....Spring Quarter Begins
April 2, Wednesday.....Recitations Spring Quarter Begin
May 30, Saturday.....Memorial Day; a holiday
June 9, Tuesday.....Last Recitations of Spring Quarter
June 10, Wednesday, to June 13, Saturday, inclusive.....
.....Final Examinations of Spring Quarter
June 18, Thursday.....Commencement

BOARD OF REGENTS.

For the Term Ending May 19, 1901.

JOHN J. DAVIS, Clarksburg. JAMES L. HAMILL, Welch
JOHN A. CAMPBELL, New Cumberland.
P. C. EASTHAM, Point Pleasant. W. E. POWELL, Parkersburg
GEORGE C. STURGISS, Morgantown.
JAMES F. BROWN, Charleston. A. H. KUNST, Weston
CHARLES R. OLDHAM, Moundsville.

Officers of the Board of Regents.

GEORGE C. STURGISS, President.
WAITMAN BARBE, Secretary.
A. R. WHITEHILL, Treasurer.
S. G. CHADWICK, Auditor.

For the Term Beginning May 19, 1901.

For Two Years.

J. R. TROTTER, Buckhannon. C. R. OLDHAM, Moundsville.
J. B. FINLEY, Parkersburg. C. M. BABB, Falls.

For Four Years.

C. E. HAWORTH, Huntington. E. M. GRANT, Morgantown.
J. M. HALE, Princeton. D. C. GALLAHER, Charleston.
W. J. W. COWDEN, Wheeling.

Board of Regents of the Montgomery Preparatory School.

THOS. C. MILLER, State Superintendent of Schools, ex-officio.
JAMES F. BROWN, Charleston.
P. C. EASTHAM, Point Pleasant.

OFFICERS OF INSTRUCTION

AND

ADMINISTRATION.

THE FACULTY.

*JEROME HALL RAYMOND, Ph. D., President and Professor of Economics and Sociology.

A.B., Northwestern University, 1892; A.M., *ibid.*, 1893; Ph.D., University of Chicago, 1895. Traveling and studying in Europe and Asia, 1890-2; Lecurer in History, and Secretary, Chicago Society for University Extension and editor of "The University Extension Magazine," 1892-3; Professor of History and Political Science, Lawrence University, 1893-4; Lecturer in Sociology, and Secretary of the Class Study Department, University Extension Division, University of Chicago, 1894-5; Assistant in Sociology, *ibid.*, 1895; Professor of Sociology, and Secretary of the University Extension Department, University of Wisconsin, 1895-7; present position since 1897.

POWELL BENTON REYNOLDS, D.D., Acting President, and Professor of Philosophy.

A.M., West Virginia University, 1887; D.D., Richmond College, 1890. Student, Richmond College, 1866-70. President Shelton College, 1872-84; President Buckner College, 1884-5; Professor of English, West Virginia University, 1885-9; Vice President and Professor of Metaphysics, *ibid.*, 1889-93; Acting President, *ibid.*, 1893-5; Professor of Metaphysics and Political Science, *ibid.*, 1895-7; present position since 1897.

WAITMAN BARBE, A. M., Assistant to the President, and Associate Professor of the English Language and Literature.

B.S., West Virginia University, 1884; M.S., *ibid.*, 1887; A.M., 1897. City editor "Daily State Journal," Parkersburg, W. Va., 1885-9; Managing editor, *ibid.*, 1889-95; Regent West Virginia State Normal Schools since 1895; Field Agent, West Virginia University, 1895-8; Graduate student, Harvard University, 1900; present position since 1898.

ST. GEORGE TUCKER BROOKE, LL.D., Professor of Common and Statute Law.

A.M., West Virginia University, 1889; LL.D., Wake Forest College, 1890. Student, University of Virginia Law School, 1867-9; member bar, Charles Town, W. Va., since 1869; present position since 1878.

WILLIAM P. WILLEY, A.M., Professor of Equity Jurisprudence and Commercial Law.

A.B., Dickinson College, 1862; A.M., *ibid.*, 1865; member bar, Morgantown, W. Va., and Baltimore, Md., 1865-78; editor Wheeling "Register," 1878-83; present position since 1883.

ALEXANDER REID WHITEHILL, Ph.D., Professor of Chemistry.

A.B., Princeton University, 1874; A.M., *ibid.*, 1893-5; Ph.D., Washington and Jefferson College, 1887. Fellow in Experimental Science, Princeton

*Resigned March 19, 1901, resignation to take effect June 21. On leave of absence from date of resignation.

University, 1874-5; Graduate student, University of Leipzig and Freiberg School of Mines, Germany, 1874-5; Professor of Experimental Science, University Mound College, 1876-81; Principal Linsly Institute, 1881-5; present position since 1885.

JOHN LINDSAY JOHNSTON, C.E., Professor of Civil and Mining Engineering.

B.S., West Virginia University, 1883; M.S., *ibid.*, 1886; C.E., *ibid.*, 1889. Assistant Locating Engineer, W. V. & P. R. R., 1883-5; Draughtsman, C. W. & B. R. R., 1875; Locating and Construction Engineer, W. & C. Natural Gas Company, Pittsburg, 1885-6; Assistant to Division Engineer, B. & O. R. R., 1886; Assistant Engineer, Penna. R. R., 1886-90; Instructor in Engineering, West Virginia University, 1890-1; Professor of Applied Mathematics and Drawing *ibid.*, 1891-3; present position since 1893.

SAMUEL B. BROWN, A.M., Professor of Geology and Mineralogy.

A.B., West Virginia University, 1883; A.M., *ibid.*, 1886. Graduate student, National Museum, 1884; Harvard University, 1891; Teacher of Languages and Mathematics, Martinsburg, W. Va., 1883-5; Principal Glenville State Normal School, 1885-90; Assistant in Geology, West Virginia University, 1890-2; present position since 1892.

*THOMAS CONDIT MILLER, A.M., Professor of Pedagogy, and Principal of the Preparatory School.

Graduate State Normal School, 1873; A.M., West Virginia University, 1889. Principal Fairmont High School, 1873-4; Student, Adrian College, 1875-7; Superintendent of Schools, Fairmont, W. Va., 1877-93; present position since 1893.

JAMES SCOTT STEWART, M.S., Professor of Mathematics.

B.S., West Virginia University 1877; M.S., *ibid.*, 1880. Assistant in Preparatory School, West Virginia University, 1877-91; Professor of Mathematics, *ibid.*, 1891-9; Superintendent of Schools, Fairmont, W. Va., 1893-4; present position since 1894.

OKEY JOHNSON, LL.B., A.M., Dean of the College of Law, and Professor of Constitutional and International Law and the Law of Corporations.

LL.B., Harvard University, 1858; A.M., Marietta College, 1874. Admitted to the bar, 1858; Attorney-at-law, Middlebourne, 1858-62; Parkersburg, 1862-77; Member of West Virginia Senate, 1870-1; Member West Virginia Constitutional Convention, 1872; Judge of West Virginia Supreme Court of Appeals, 1877-90; President, *ibid.*, 1883-90; Attorney-at-law, Charleston, 1890-5; present position since 1895.

ROBERT WILLIAM DOUTHAT, Ph.D., Professor of the Latin Language and Literature.

A.M., Emory and Henry College, 1874; Ph.D., Roanoke College, 1877. Professor of Languages, Missouri University School of Mines and Metallurgy, 1873-84; President Collegiate Institute (New Mexico), 1884-7; President Collegiate Institute (Arkansas), 1887-9; Professor of Languages, Kentucky Military Institute, 1889-90; President Barboursville College, 1890-5; Professor of Ancient Languages, West Virginia University, 1895-7; present position since 1897.

**ALFRED JARRETT HARE, A.B., Professor of the Latin Language and Literature.

A.B., West Virginia University, 1899. Assistant in Latin and Mathematics, Preparatory School, West Virginia University, 1889-96; Preparatory Professor of Ancient Languages and Mathematics, *ibid.*, 1896-8; present position since 1898.

---

*Resigned March 4, 1901, to accept the office of State Superintendent of Free Schools.

**On leave of absence till June 20, 1901. Graduate student Harvard University.

*LEE CLEVELAND CORBETT, M.S., Professor of Horticulture and Forestry, and Horticulturist of the West Virginia Agricultural Station.

B.S., Cornell University, 1890; M.S., *ibid.*, 1896. Assistant Horticulturist, Cornell University, 1891-2; Professor of Horticulture and Forestry, South Dakota Agricultural College, 1893-5; present position since 1895.

BERT HOLMES HITE, M.S., Professor of Agricultural Chemistry, and Chemist of the West Virginia Agricultural Experiment Station.

M.S., West Virginia University, 1890. Graduate student, Johns Hopkins University, 1891-5; Fellow in Chemistry, *ibid.*, 1893-5; Chemist of the West Virginia Agricultural Experiment Station since 1895; Professor of Organic Chemistry, West Virginia University, 1895-7; present position since 1897. Chief Chemist of the Geological and Economic Survey of West Virginia.

THOMAS EDWARD HODGES, A.M., Professor of Physics.

A.B., West Virginia University, 1881; A.M., *ibid.*, 1884. Principal, Morgantown Public Schools, 1881-6; Principal and Instructor in Natural Science and Pedagogy, Marshall College State Normal School, 1886-96; present position since 1896. Graduate student, Cornell University, Summer, 1897.

ANDREW DELMAR HOPKINS, Ph.D., Professor of Economic Entomology, and Vice Director and Entomologist of the West Virginia Agricultural Experiment Station.

Ph.D., West Virginia University, 1893. Special agent in Entomology, West Virginia Agricultural Experiment Station, 1890-1; Entomologist, *ibid.*, since 1891; Professor of Economic Entomology, West Virginia University, since 1896; Vice-Director of the Experiment Station since 1897.

THOMAS CLARK ATKESON, Ph.D., Dean of the College of Agriculture, and Professor of Agriculture.

LL.B., Kentucky University, 1874; Ph.B., Central Normal College, 1891; Ph.D., *ibid.*, 1893; M.S., Barboursville College, 1900; Student Kentucky A. & M. College, 1874-6; Editor "W. Va. Agriculturist," 1873-4; Associate Editor "Farmer's Friend," since 1882; Associate Editor "Grange Bulletin and Scientific Farmer," since 1893; Member of the W. Va. State Board of Agriculture and Farmers' Institute Lecturer, since 1891; Professor of Agriculture, W. Va. University, 1891-3; W. Va. State Grange Secretary, 1882-4; Lecturer, 1884-6; Overseer, 1886-96; Master, since 1896; Regent W. Va. University, 1897; President Barboursville College, 1896-7; present position since 1897.

FREDERICK LINCOLN EMORY, B.S., M.M.E., M.E., Professor of Mechanics and Applied Mathematics.

B.S., Worcester, Mass., Polytechnic Institute, 1887; M.M.E., Cornell University, 1896. Director Mechanical Department, Washington, D. C., High School, 1887-90; Superintendent Trades School, Concord Junction, Mass., 1890-1; Professor of Mechanical Engineering and Mechanic Arts, West Virginia University, 1891-3; Director, Indianapolis, Ind., Industrial Training and Technical High School, 1893-5; Graduate student, Cornell University, 1895-6; M.E., Worcester Polytechnic Institute, 1899; present position since 1897. Member American Society of Mechanical Engineers.

**LEWIS CASS WOOLERY, A.M., Professor of the Greek Language and Literature.

A.B., Bethany College, 1884; A.M., *ibid.*, 1888. Principal Lafayette Seminary, Higginsville, Mo., 1884-6; Professor of Greek, Bethany College, 1887-93; member bar, Louisville, Ky., 1893-5; Professor of Greek, Drake University, Des Moines, Iowa, 1895-7; present position since 1897.

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*Resigned May 1, 1901, to accept a position as Horticulturist in U. S. Department of Agriculture.

**Died June 25, 1900.

CHARLES ALFRED ELLENBERGER, Director of the School of Music, and Professor of Music.

Graduate, New England Conservatory of Music, 1884; Graduate student, Boston and New York, 1895-7; Director School of Music, Ripon College, 1884-8; Private teaching, organist, and oratorio and choir director, Knoxville, Tenn., 1888-90; Director School of Music, Tompkinson Seminary, and organist, oratorio director, etc., Harrisburg, Pa., 1890-7; present position since 1897.

RICHARD ELLSWORTH FAST, LL.B., Ph.B., Professor of American History and Politcal Science.

LL.B., West Virginia University, 1896; Ph.B., *ibid.*, 1898; Hon. A.M., Bethany College, 1898. Practicing law, 1886-97; student, Harvard University, 1897; member West Virginia Senate, 1896-1900; Colonel 1st Infantry, W. V. N. G., 1893-7; Colonel, aide-de-camp, General Staff, W. V. N. G., 1899; Acting Commandant of Cadets, West Virginia University, 1897-1900; Instructor in American History and Political Science, *ibid.*, 1897-8; Assistant Professor, *ibid.*, 1898-9; present position since 1899.

FREDERICK WILSON TRUSCOTT, Ph.D., Professor of Germanic Languages and Literatures.

A.B., Indiana University, 1891; A.M., *ibid.*, 1892; A.M., Harvard University, 1894; Ph.D., *ibid.*, 1896. Instructor in German, Indiana University, 1891-3; Assistant in German, Harvard University, 1893-4; Scholar in Modern Languages, *ibid.*, 1894-6; Graduate student, University of Berlin, 1896-8; Assistant Professor of Germanic Languages and Literatures, West Virginia University, 1898-9; present position since 1899.

CHARLES CHOLLET, A.B., Associate Professor of Romance Languages and Literatures.

A.B., Harvard University, 1887; Instructor in Languages, Mt. Beacon Academy, Fishkill, N. Y., 1888; Professor of French, German and Greek, Louisiana State University, 1888-91; Professor of Latin and Greek, Louisiana State University, 1891-3; Principal of the Poydras Academy, New Roads, La., 1893-7; Graduate student, Columbia University, 1897-1900; Instructor in French, Latin and Greek, Sachs' Collegiate Institute, New York City, 1898-1900; present position since 1900.

CHARLES HENRY PATTERSON, A.M., Professor of the English Language and Literature.

A.B., Tufts College, 1887; A.M., *ibid.*, 1893. Student in Elocution, 1887-8; Principal of High School, West Newbury, Mass., 1888-90; Principal and teacher of English and Elocution, Preparatory School, Turners Falls, Mass., 1889-91; student of dramatic art, Boston Museum, Margaret Mather and other companies, 1891-3; graduate student in English, Tufts College, 1891-3; Principal and teacher of English and Elocution, Preparatory School, Hinsdale, N. H., 1893-8; student, School of Expression, Boston, Mass., 1895; teacher, *ibid.*, 1896-7; student at Comedie Francaise, Paris, 1897; Graduate student, University of Chicago, Summer 1899; pupil of M. T. Brown, S. S. Curry, Otis Skinner, Georges Berr, George Riddle, and others; Assistant Professor of Rhetoric and Elocution, West Virginia University, 1898-9; present position since 1899.

FREDERICK PHILIP RUHL, D.V.S., Professor of Veterinary Science.

D.V.S., American Veterinary College, New York, 1884. Practicing veterinary medicine since 1884; Consulting Veterinarian, West Virginia State Board of Agriculture since 1896; present position since 1899.

JAMES MADISON BURNS, Major U. S. Army, Professor of Military Sciences and Tactics, and Commandant of Cadets.

Graduate of Beaver Academy. Entered the Union Army in 1861. Served in the 1st and 2nd West Va. Volunteers until the close of the war. Appointed 2nd Lieut., 17th U. S. Infantry, and served in that regiment until promoted Major in May, 1899. Professor of Military Science and Tactics, and Commandant of Cadets, Ohio State University, 1899-1900; present position since 1900.

EDWIN BINGHAM COPELAND, Ph.D., Professor of Botany.

A.B., Leland Stanford Junior University, 1895; A.M., and Ph.D., University of Halle, Germany, 1896. Assistant in Biology, University of Wisconsin, 1893-4; Honorary Fellow in Botany, *ibid.*, 1896-7; Assistant Professor of Botany, Indiana University, 1897-8; Teacher of Science, State Normal School, Chico, California, 1899; present position since 1899.

LUCY CELESTE DANIELS, Ph.M., Assocate Professor of European History.

B.L., University of Wisconsin, 1879; Ph.M., University of Chicago, 1895; Teacher at La Crosse, Wis., 1880-8, and in the Public Schools, Minneapolis, 1888-90; Instructor in English and Latin, Central High School, Minneapolis, 1889-92, and in the Girls' High School, Brooklyn, 1892-93; Instructor in History and Latin, Girls' Classical School, Indianapolis, 1893-4; Graduate student in Political Science and History, University of Minnesota, 1889-91, and University of Chicago, 1894-5; Instructor in History, Northwest Division High School, Chicago, 1895-6, and Lewis Institute, Chicago, 1896-9; Lecturer in History, West Virginia University, Summer Quarter, 1899; present position since 1899.

CLEMENT ROSS JONES, M.M.E., Assistant Professor of Mechanical Engineering.

B.S.C.E., West Virginia University, 1894; M.E., *ibid.*, 1897; M.M.E., Cornell, 1900. Associate Principal, West Virginia College, 1894; Assistant in Mechanical Engineering, West Virginia University, 1895-7; Instructor, *ibid.*, 1897-9; present position since 1899. Special student in shop work, Worcester Polytechnic Institute, Summer, 1896; special student experimental engineering, Stevens Institute of Technology, Summer, 1897; Graduate student, Cornell University, 1899-1900. Associate member American Society of Mechanical Engineers.

RUSSELL LOVE MORRIS, C. E., Assistant Professor of Civil and Mining Engineering.

B.S.C.E., West Virginia University, 1895; C.E., *ibid.*, 1898. Consulting Engineer, State Board of Agriculture; Chief Draughtsman, West Virginia State Geological and Economic Survey; Assistant in Civil and Mining Engineering, West Virginia University, 1895-7; present position since 1898.

FREDERICK LAWRENCE KORTRIGHT, D. Sc., Assistant Professor of Chemistry.

B.S., Cornell University, 1890; D.Sc., *ibid.*, 1895. Assistant in Chemistry, *ibid.*, 1890-1; Chemist, Solvey Process Company, 1891-2; Assistant in Chemistry, Cornell University, 1892-3; Instructor in Chemistry, *ibid.*, 1893-9; Graduate student, Polytechnicum, Switzerland, 1899-1900; and Technische Hochschule, Carlsruhe, Germany, 1900; Instructor in Chemistry, Cornell University, 1900.

JAMES DAVID THOMPSON, A.M., M.Sc., Assistant Professor of Mathematics.

Dalton Senior Mathematical Scholar, Owens College, Manchester, England, 1891; B.Sc., (1st in Mathematical Honors), Victoria University, England, 1892; M.Sc., *ibid.*, 1895; B.Sc., and University Exhibitioner in Mathematics, London University, 1893; A.B., (16th Wrangler, Mathematical Tripos), University of Cambridge, 1895; Natural Sciences Tripos, Part II, *ibid.*, 1896; Major Foundation Scholar, Trinity College, Cambridge, 1894-8; A.M., *ibid.*, 1899. Lecturer and Demonstrator in Physics, University College, Sheffield, England, 1896-8; Lecturer in Mathematics, *ibid.*, 1897-8; Lecturer in Applied Mathematics, Graduate School, University of Chicago, Autumn Quarter, 1898; Lecturer in Mathematics and Astronomy, West Virginia University, Summer Quarter, 1899; present position since 1899.

HANNAH BELLE CLARK, Ph.D., Assistant Professor of Domestic Science and Dean of Women.

A.B., Smith College, 1887; Ph.D., University of Chicago, 1897; Graduate Student in Sociology, Smith College, 1887-88; Graduate Student in Sociology and Sanitary Science, University of Chicago, 1893-6; Instructor in Dearborn Seminary, Chicago, 1887-93 and 1894-9; present position since 1899.

JOHN BLACK JOHNSTON, Ph.D., Assistant Professor of Zoölogy.

Ph.B., University of Michigan, 1893; Ph.D., *ibid.*, 1899. Graduate student and Assistant in Zoology, *ibid.*, 1893-7; Instructor in Zoology, *ibid.*, 1897-9; present position since 1899.

WILLIAM SEAGROVE MAGILL, Acting Professor of Bacteriology and Pathology.

A.B., Amherst College, 1887; B.L., University of Paris, France, 1889; B. S., *ibid.*, 1889; A.M., Amherst College, 1891; M.D., University of Paris, 1894. Professor of Biology, Amherst Summer School, 1887; Chemist, Boston Color Company, 1887-8; Superintendent, *ibid.*, 1888-9; Student, University of Paris, 1889-98; Student, Bacteriological Laboratory, Institut Pasteur, 1891, and later; Assistant, Bacteriological Laboratory, Bichat and Necker Hospitals, Paris, 1892-7; Medical and Surgical service in Paris, Hospital de la Charite, 1890; Hospital Tenon, 1891; Hospital Necker, 1891-2; Graduate student, Zurich, Switzerland, 1892; Hospital Bichat, 1892-7; Obstetrical service, Clinique Baudeloque, 1893. Medical license from State of Illinois, 1893; Medical license from State of West Virginia, 1894; Graduate student, University of Vienna, Austria, 1895; Medical license from State of New York, 1897; Consulting Toxicologist, New York, 1898-1900; Fellow of the American Academy of Science.

DENNIS MARTIN WILLIS, LL.B., Instructor in Bookkeeping and Commercial Practice, and Principal of the Commercial School.

LL.B., West Virginia University; Instructor Methodist Conference Seminary, Buckhannon, 1891-2; Instructor, West Virginia Business College, 1892-3; Instructor Northwestern Academy, Clarksburg, 1893-4; Instructor, Central Commercial College, Cumberland, Md., 1894-5; Principal, Weston College of Commerce, 1895; present position since 1895.

EVA EMMA HUBBARD, Instructor in Drawing and Painting.

Graduate, Morgantown Female Seminary, 1876; student in Mrs. J. P. Wilkinson's studio, Wheeling, 1881-2; Instructor in Drawing and Painting, Wheeling Female College, 1883-4; student in the Carl Hecker Art School, New York City, 1884-5; Instructor in Fine Arts, Mountain Lake Park Summer Chautauqua, 1885-8; private studio, Wheeling, 1889-94; Instructor in Drawing and Painting, Mrs. M. Stephen Hart's School for Young Ladies, 1894-7; present position since 1897.

RUSSELL McMURPHY, Instructor on the Piano.

Graduate, New England Conservatory of Music, Boston, 1892; Principal Musical Department, St. Mary's College, Dallas, Texas, 1892-5; Graduate work with Barth in Berlin, 1895-6; Principal, Music Department, St. Mary's College, 1896-7; present position since 1897.

BENJAMIN GRAEFF PRINTZ, Director of the Gymnasium and Instructor in Physical Training.

Student, Hemenway Gymnasium, Harvard University; Director of the Gymnasium and Instructor in Physical Training, Wittenberg College, 1892-8; present position since 1898.

THEODORE CHRISTIAN RUDE, Instructor on Stringed Instruments.

Student, Royal Conservatory of Music, Leipzig, Germany, 1883-4; student, A. Brun, Lucian Andre, Jean Tietrapertosa, Paris, 1895-6; teacher in Iowa College, Grinnell, Iowa, 1890-4; teacher in Mary Nash Female College, Sherman, Texas, 1894-5; teacher in Patton Seminary, Dallas, Texas, 1897-8; teacher in Ouachita Baptist College, Arkadelphia, Arkansas, 1898-9; present position since 1899.

LLOYD LOWNDES FRIEND, A.B., Instructor in English.

A.B., West Virginia University, 1897. Assistant in West Virginia University Preparatory School, Montgomery, 1897-8; Fellow in English, West Virginia University, 1898-9; Assistant in English, *ibid.*, 1899-1900; present position since 1900.

JOHN ETHAN HILL, Ph.D., Instructor in Mathematics.

Ph.B., Yale University, 1885; Ph.D., Clark University, 1895. Resident Engineer C. M. & St. P. R. R., 1885-8; teacher of Mathematics, Louisville Military Academy, Louisville, Ky., 1888-1890; Professor of Higher Mathematics and Civil Engineering, Highland Park College, Des Moines, Iowa, 1890-2; Fellow in Mathematics, Clark University, Worcester, Mass., 1892-5; Tutor in Mathematics, Columbia University, 1895-8; Teacher of Mathematics and Science, Stamford High School and Adelphi College, 1898-1900; present position since April, 1900. Member of the American Mathematical Society; member of the Scientific Alliance; member of the American Association for the Advancement of Science; junior member of the American Society of Civil Engineers.

WILLIAM JACKSON LEONARD, Instructor in Fine Arts.

Student, The Cowles Art School, Boston, 1889-90; pupil of Jean Paul Laurens and Benjamin Constant, Paris, 1891-93; student, Academie Julien and Ecole des Beaux Arts, Paris; special student, Harvard University; Studio and Instructor, Boston, and Hinsdale, N. H.; present position since 1900.

GRACE MARTIN, B.M., Assistant on the Piano.

Graduate, Virginia College for Young Ladies, 1893; B.M., *ibid.*, 1894. Instructor in Piano Department, *ibid.*, 1893-4; graduate student, Peabody Institute, Baltimore, 1895-6; present position since 1897.

ELIZABETH LEE WHITESCARVER, Assistant in Shorthand and Typewriting.

Student in Commercial School, West Virginia University, 1896-8; present position since 1898.

DANIEL WEBSTER OHERN, A.M., Assistant in Greek.

A.B., Drake University, 1898; A.M., West Virginia University, 1899. Fellow in Greek, West Virginia University, 1898-9; present position since 1899.

SIMEON CONANT SMITH, A. B., Assistant in Rhetoric and Elocution.

A.B., Tufts College, 1898; Fellow in Rhetoric and Elocution, West Virginia University, 1899-1900; present position since 1900.

THOMAS ZEPHANIAH ATKESON, B.S. Agr., Fellow in Agriculture.

B.Agr., West Virginia University, 1899; B.S.Agr., *ibid.*, 1900.

*ROBERT MORRIS, LL.B., A.M., Fellow in Economics.

A.B., University of Nashville, 1896; A.B., and LL.B., West Virginia University, 1899; A.M., *ibid.*, 1900.

ALBERTA CLAIRE McVICKER, A.B., Fellow in English.

A.B., West Virginia University, 1900.

ALLEN WILSON PORTERFIELD, A.M., Fellow in German.

A.B., West Virginia University, 1899; Instructor in Shepherd College State Normal School, 1899; A.M., West Virginia University, 1901.

JEANNETTE EVA CARTER, Fellow in Romance Languages.

Ph. B., Adrian College, 1889; Instructor in Botany and Zoology, Adrian College, 1890-1; Graduate student, Bryn Mawr College, 1891-2; Teacher of Mathematics, Methodist College, Jackson, Tenn., 1892-3; Professor of Natural Sciences, Belhaven College, Miss., 1894-5; Instructor in Natural Sciences, State Normal School, Fairmont, W. Va., 1896-7; Graduate student in University of Gottingen, Germany, 1897-8; Student in College de France (Summer), 1898; Teacher in High School, Maderia, California, 1898-9; Professor of Modern Languages, Shorter College, Georgia, 1899-1900.

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*Resigned to accept the Henry Lee Memorial Fellowship in Economics at Harvard University.

CLARENCE POE, A.B., Fellow in History.

A.B., West Virginia University, 1900.

ELEANOR BROWN MORELAND, A.B., Fellow in Domestic Science.

A.B., West Virginia University, 1898. Graduate student in Domestic Science, Lewis Institute, 1899-1900.

GEORGE WASHINGTON CONLEY, A.B., Fellow in Physics.

A.B., West Virginia University, 1900.

HENRY HALL PARKE, M.S., Fellow in Zoölogy.

B. L., University of Michigan. 1898; Assistant in Museum, *ibid.*, 1897-9; Assistant in Zoology, *ibid.*, 1899-1900; M.S., *ibid.*, 1900.

BERTHA CLELAND BROWNING, A.B., Instructor in English.

A.B., West Virginia University, 1900.

STAFF OF THE PREPARATORY SCHOOL AT MONTGOMERY.

JOSIAH KEELEY, A.B., Principal and Teacher of History and Latin.

A.B., West Virginia University, 1896. Present position since 1897.

RUBY RAY KNIGHT, B.S., Mathematics and German.

B.S., Ohio State University, 1896. Present position since 1897.

ALTHA WARMAN, A.B., Greek and English.

A.B., West Virginia University, 1893. Graduate student, *ibid.*, 1897-8; present position since 1898.

MARION F. CABELL, French and Instrumental Music.

LIBRARY STAFF.

ELIZA JANE SKINNER, Librarian.

Student, Zurich, Heidelberg and Paris, 1893-5; Librarian, Matson Public Library, Princeton, Ill., 1896; Library School, Armour Institute of Technology, 1896-7; Instructor in Cataloguing, Summer School of Library Science, University of Wisconsin, 1898; Library Director, West Virginia University, 1897-8; present position since 1898.

ANNA BANCROFT WHITE, B.S., Assistant in the Library.

B.S., West Virginia University, 1895. Graduate student, *ibid.*, 1897-8; present position since 1897.

WILLIAM WINFRED SMITH, Assistant in the Library.

Present position since 1899.

CHARLES WILBUR STUMP, Assistant in Law Library.

AGRICULTURAL EXPERIMENT STATION STAFF.

JAMES HENRY STEWART, A.M., Director and Agriculturist.

ANDREW DELMAR HOPKINS, Ph.D., Vice-Director and Entomologist.

BERT HOLMES HITE, M.S., Chemist.

*LEE CLEVELAND CORBETT, M.S., Horticulurist.

WILLIAM EARL RUMSEY, B.S.Agr., Botanist and Assistant Entomologist.

HORACE ATWOOD, M.S., Assistant Agriculturist.

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*Resigned May 1, 1901.

CHARLES DANFORTH HOWARD, B.S., Assistant Chemist.
FRANK BATSON KUNST, Assistant Chemist.
EUGENE CARL FRAME, Clerk and Stenographer.
MARTHA ANNE STEWART, Librarian.

OTHER OFFICERS.

ALBERT JACKSON COLLETT, Secretary to the President.
ELLA ELIZABETH EGBERT, Secretary to the President.
HENRY ST. CLAIR, Armorer.

WEST VIRGINIA UNIVERSITY.

Organization.

The University organization consists of the following colleges, schools and departments:

I. The College of Arts and Sciences.
II. The College of Engineering and Mechanic Arts.
III. The College of Agriculture.
IV. The College of Law.
V. The School of Music.
VI. The Commercial School.
VII. The Preparatory Schools.
VIII. The Department of Fine Arts.
IX. The Premedical Department.
X. The Military Department.
XI. The Department of Physical Training.
XII. The Department of Domestic Science.

Origin and Location.

In 1814 the Legislature of Virginia passed an act incorporating the Monongalia Academy, and locating it at Morgantown. The first building was a one-story brick structure, divided into two rooms. In 1828 this building was sold, and a two-story brick building erected. As a further endowment, the Virginia Legislature passed an act authorizing the trustees of the Academy to raise twenty thousand dollars by a lottery, and the drawings for this lottery were conducted January 26, 1832. In later years the Monongalia Academy became an institution of wide reputation, drawing students at one time from fourteen states. For more than fifty years it was the leading school in Virginia west of the mountains.

On July 2, 1862, Congress passed an act donating public lands to the several states to establish "colleges for the benefit of Agriculture and Mechanic Arts." In 1864 this act was extended to the new state of West Virginia, and in 1867 the West Virginia Agricultural College was founded. The trustees of the Monongalia Academy gave to the state all of the real estate and personal effects of the Academy. The building and grounds of Woodburn Seminary, a

school for girls in Morgantown, were also donated, and the new College succeeded the old academy and seminary, inheriting an honorable record and much good will. The first faculty meeting was held August 20, 1867, and on September 2 of that year the school was formally opened. In 1868 the name of the new institution was changed by an act of the Legislature to the West Virginia University.

Morgantown, the seat of the University, is the county seat of Monongalia county, and is a beautiful little town of thirty-five hundred inhabitants, on the Monongahela river and the Baltimore and Ohio Railroad, 103 miles east of Wheeling, and the same distance south of Pittsburg. It has the modern conveniences of natural gas, waterworks, electric lights, and local and long distance telephones, and is noted for its healthful conditions, physical, social and moral. There are churches of the following denominations in the town: Presbyterian, Methodist Episcopal, Methodist Protestant, Baptist, Proestant Episcopal, Lutheran, Christian, and Roman Catholic. There are no saloons in Morgantown.

Few institutions of learning have more attractive natural sites. The University grounds border the Monongahela river, and afford a most picturesque outlook. The campus comprises about twenty-five acres. The University also has a farm of about one hundred acres for the use of the Agricultural Experiment Station and the College of Agriculture.

Funds.

The funds for maintaining the University are derived from the following sources: (1) Interest on the land grant endowment of $114,750; (2) the Morrill fund; (3) the Hatch fund; (4) biennial appropriations by the State Legislature; (5) fees and tuitions, the latter being paid only by students from other states.

Buildings.

There are six main brick buildings, as follows:

1. University Hall, a four-story building, containing lecture rooms and the Botanical and Zoölogical laboratories. A large right wing to this building was recently completed, the third floor of which is occupied by the School of Music.

2. Martin Hall, a three-story building, containing lecture rooms, the Library and society halls.

3. Science Hall, a four-story building, containing lecture rooms, and laboratories for the departments of Physics, Chemistry, Geology, Civil Engineering, and Drawing and Painting, and also the President's office.

4. Commencement Hall, a large two-story building, containing a commodious chapel, with 1,500 seats, and the gymnasium.

5. Agricultural Experiment Station, a two-story building, containing laboratories, lecture rooms, and offices.

The lecture rooms are crowded, and there is pressing need for additional buildings. These are now in process of erection. They will be ready for use the coming year, namely:

6. An Armory and Drill Hall for the Military Department;

7. A Library and Museum Building;

8. A Mechanical Hall.

DEPARTMENTAL EQUIPMENTS.

Physics.

The department of Physics has its lecture room and laboratories in Science Hall. A large room on the basement floor of this building has been fitted up as a laboratory and equipped with apparatus for individual experimental work. Work of this character is required of students in every regular course given in the department.

The apparatus for electrical measurements and test work is especially well selected and of superior quality. Students in electrical subjects have opportunity to become familiar with the use of the latest and most improved forms of apparatus for measurement of current, resistance, electromotive force, quantity, capacity, induction, etc.

The lecture table equipment is also quite extensive. The laboratory is open for the use of students every afternoon except Saturday. All laboratory work is under the personal supervision of the instructor.

Chemistry.

The rooms assigned to this department are located on the second floor of Science Hall, and consist of a lecture room and two large laboratories. Connected with these are a dark room, a weighing room, and a preparation room. The laboratories afford working space for sixty-five students at a time, and are abundantly supplied with water and gas and the chemicals and apparatus necessary for practical work. This apparatus includes a large number of pieces used in illustrating the elementary principles of the science, as well as many of the more expensive instruments used in analytical work. An excellent collection of the latest text and reference books is kept within easy reach of the students, and the aim has been to make the laboratory outfit as complete and ample as possible.

Geology.

The equipment for purposes of illustrative teaching in this subject consists of many thousands of fossils, casts and models, a good

collection of minerals, specimens of all of the important building stones, Ward's College Collection in Palaeontology, showing the advancement from the early forms of life to those of the present time. The University is situated in the midst of a great coal producing region, within five miles of the western fold of the Appalachain mountains, and oil and gas wells are but a short distance away. The natural facilities, therefore, for the study of Geology are unsurpassed.

Entomology.

The equipment of the Entomological department consists of a collection of over 20,000 specimens and over 7,000 separate notes on original observations taken in West Virginia by the Entomologist. The apparatus for collecting, breeding, mounting, preserving and studying specimens is complete. The microscopic outfit is sufficiently perfect for carrying on any class of study in this line. The photographic department is thoroughly equipped for the requirements of entomological and other work.

Botany.

The Botanical Laboratory is equipped with 13 good Bausch and Lomb microscopes; hand lenses; microtome; standard stains and chemicals, and apparatus; special physiological apparatus including centrifugal machine, clinostat, anxanometer, devices for the automatic registration of transpiration and photosynthesis, and complete apparatus for the study of respiration; dark room; projection apparatus; and a large collection of alcoholic histological material. The herbarium of the Professor of Botany is stored in the laboratory and is available for reference. The Department of Botany has always been granted any needed use of the green-houses of the Experiment Station.

Zoology.

The Zoölogical Laboratory comprises two laboratory rooms and a small room for mammals. The laboratory rooms have about 1600 feet of floor space, are lighted by north windows, and are provided with ebonized oak tables, dust proof cases for apparatus, and ample shelves and drawers. The rooms are supplied with gas on all the tables, Welsbach and electric lights and with a plentiful supply of water. The laboratory will accommodate thirty-two students at one time.

There is a good equipment of microscopes, including a large Zeiss microscope fitted with apochromatic objectives and compensating eyepieces, dissecting microscopes, a Minot-Zimmerman microtome, a paraffin bath of special design accommodating twenty-two

workers, incubator, water-still, and the usual minor apparatus, glassware, and reagents for class work and investigation. There is a set of Ziegler's wax models of the chick and a number of Auzoux models, including the large model of the human brain. There is a large collection of fishes and amphibia, and a constantly increasing number of anatomical and embryological preparations.

The surrounding country offers unusual opportunities for the study of amphibia and the laboratory is well provided with the means for studying the living animals and their development, there being an open air aquarium twenty-three feet long, and indoors one three and a half feet long and twelve of smaller size for frogs, turtles, etc., and provision is made for maintaining sixteen small aquaria and hatching jars with running water.

For lecture purposes there is a Colt projection lantern and a good collection of lantern slides.

The library contains the recent important books of reference, a few monographs of special groups, full files of the Journal of Morphology, Journal of Comparative Neurology, Anatomischer Anzeiger, Merkel und Bonnet's Ergebnisse, Zoölogische Jahrbücher, and current subscriptions to a number of other important journals.

Astronomy.

A students' astronomical observatory has recently been erected on the top of the hill in the northeast corner of the University campus. The dome is thirteen feet in diameter, and is similar in construction to the Hough type. It is equipped with an achromatic telescope of five and one-half inches aperture, and six feet local length, mounted equatorically on an iron pier, and driven by clockwork mechanism. The telescope is provided with an assortment of eyepieces of high and low powers, with fittings for different kinds of work. It is hoped that a McClean Star-Spectroscope and a Grating Spectroscope for sun observations may be added shortly. Demonstrations with the telescope are given in connection with the elementary class, and the more advanced students are assigned individual work at the observatory to the full extent of its possibilities Students in Civil Engineering are given practice in the determination of latitude, longitude, azimuth and true meridian with the surveyor's transit, and the same instrument is used for practice in ordinary observatory measurements until a properly equipped transit-house is provided. For illustrating the lectures, a carefully selected assortment of lantern slides, drawings, maps, diagrams and models, has been obtained, and this is supplemented by apparatus lent by other departments. The library contains the principal hand books and treatises in each section of descriptive and mathe-

matical astronomy, together with the publications of the U. S. Government, the files of "Popular Astronomy" and the Astrophysical Journal, and the bulletins from Harvard, Lick and Yerkes observaatories.

Civil Engineering.

The material equipment of this department consists of the civil engineering laboratory, equipped with a collection of apparatus and instruments for instruction in engineering believed to be complete and modern, consisting of transits, levels, theodolites, surveyors' compasses, aneroid barometers, plane table, solar compass, sextant clinometers, odometer, pendometers, telemeters, prismatic compass, hand levels, a full collection of drawing instruments, blue printing outfit, complete set of United States standard weights and measures, testing machines for testing strength of materials, as wood, iron, steel, stone, cement, mortar, etc.; a drawing room containing a large number of descriptive geometry models, and models of bridges, furnaces and many other structures, and a large number of wood and plaster paris casts and models pertaining to descriptive geometry, architecture, etc. The equipment of the Department of Physics, described above, is of great value to students in the Engineering courses.

Commercial School.

The Commercial School has recently been fitted out with the latest improved modern commercial school furniture, including three new banking counters and office desks, and a complete equipment for the most extensive business practice. Ten new Smith Premier typewriters have been added to the Typewriting Department for the use of students.

Gymnasium.

The gymnasium includes all of the first story of Commencement Hall, and is well furnished with Indian clubs, dumb-bells, wands, vaulting, horizontal, traveling and parallel bars; finger, wrist and hand machines; flying rings, chart and intercostal machines, quarter circle, adjustable ladder, climbing ladder, plain rope trapeze, traveling rings, striking bags and drum, boxing gloves, hammer and shot, heavy bells, medicine ball, lockers, large plunge bath and shower baths, horse, batteau boards, jumping standards, stands, and basket ball outfit.

Young women have the same advantages in the Gymnasium as young men, certain hours being reserved for them, and regular classes being formed exclusively for them.

Athletics.

Besides the regular military drill, physical training exercises and gymnasium instruction, sufficient attention is given to field sports, such as foot-ball, base-ball, track contests, tennis, etc.

All field sports are under the control of the Faculty Committee on Athletics. The West Virginia University Athletic Association has been organized and chartered for the purpose of developing the athletic interests of the University.

Students who represent the University in intercollegeiate athletic contests are required to conform to the rules recommended by the Pittsburg Conference of Colleges. No student who fails to maintain a satisfactory standard of scholarship will be permitted to participate in intercollegiate games.

The athletic ground, adjoining Commencement Hall, is well adapted to out-of-door sports.

The Central Oratorical League.

In May, 1900, the West Virginia University was admitted into the Central Oratorical League. This organization at present consists of the Ohio Wesleyan University, Ohio State University, the University of Indiana, Cornell University, the University of Illinois, and the West Virginia University. The object of this League is to maintain a high standard of oratory among college students and to foster an interest in public speaking by holding contests in oratory at such times and places as shall be decided upon by a two-thirds vote at the annual business meeting of the League.

The annual contests of the League shall be held the third Friday in May in each year.

Only bona fide students of the University they represent shall be eligible to the annual contests of the League.

No oration shall be accepted the length of which will require more than sixteen (16) minutes in delivery by the author.

Each contestant shall furnish sixteen printed copies of his oration to the Secretary, and two to the keeper of the archives not later than the morning of the day on which the contest is held. These orations shall be printed in the following uniform standard: They shall be set in brevier type, the body of each page being four inches in width and six inches in length with a margin one and a half inches in width.

The rulings of the Committee on Prizes and Contests to govern the contestants in the preliminary contests in this University as follows:

There shall be three preliminary and one final contest; the preliminary contests to be held the first Friday in November, the

first Friday in December, and the first Friday in January; the final contest to be held on the first Friday evening in February.

In each of the preliminary contests, not more than half the number who compete shall be chosen, it being understood that in no case shall more than three be selected.

All contestants who have won any preliminary contest shall be eligible for the final contest when the one man to represent the University shall be chosen.

Societies.

The literary, scientific, religious and other societies of the University are the following:

1. The Columbian Literary Society. Regular meetings every Friday night in its own hall in Martin Hall. Membership open to all students of the University.

2. The Parthenon Literary Society. Regular meetings every Friday night in its own hall in Martin Hall. Membership open to all students of the University.

3. The Engineering Society. Regular meetings the first and third Friday nights of each month in room 14, Science Hall. Membership open to all students in the College of Engineering and Mechanic Arts.

4. The Aurora Grange, number 372, Patrons of Husbandry. Regular meetings every Tuesday night in the lecture room of the Experiment Station. Membership open to all students in the College of Agriculture and others who may be elected.

5. Young Men's Christian Association. Organized to promote the spiritual life of its members, and by united effort to assist others in living consistent Christian lives.

Regular devotional meetings, at which addresses on religious topics are frequently delivered by Professors of the University, are held every Friday at 6 P. M.. All students are cordially invited to attend these meetings. Different courses of Bible Study are arranged and conducted by trained students. A handbook of useful information for all new students is published annually. The Association has Active and Associate members. Any student or member of the Faculty who is a member of an Evangelical Church is eligible to active membership. Any man of good moral character, either student or member of the Faculty, may become an associate member. The fees are 50 cents a year.

6. The Debating Club. Regular meetings at 7:30 every Saturday evening in room number 11, University Hall. Its purpose is for the logical discussion of political and economic questions. Membership open to all students of the University.

7. The Choral Society. Regular meetings every Tuesday at

7:30 P. M. in Commencement Hall. Membership open to all students in the School of Music and all others interested.

8. The Athletic Association. Organized for the purpose of encouraging and developing the athletic interests of the University. Incorporated under the laws of West Virginia. Membership open to all students of the University.

Theses.

Every candidate for a degree is required to present an acceptable thesis before the degree will be conferred. The thesis counts as one full course. Each student elects the department of study in which he will write his thesis, and selects the subject of the thesis in conference with the head of that department. The subject of the thesis and the thesis itself must be approved by the head of the department in which the student elects to write his thesis.

Theses must be typewritten with black non-copying record ink on Crane's Japanese linen paper, of quality 24 pounds to the ream, folio size. This paper, of right quality and correct size, viz., 8x10 inches, may be obtained at the University book room, or at any bookstore in Morgantown. A margin of one and one-fourth inches must be left at the left edge of each sheet, and a margin of three-fourths of an inch on the other edges. The title page should follow, *mutatis mutandis*, the sample title page on the bulletin board in the Library.

When the thesis is typewritten and ready for binding, the student will secure the written approval of the professor under whose direction the thesis has been prepared. This approval is to be written on a blank sheet accompanying the thesis, and must be obtained before the thesis is delivered at the Library.

Theses when presented to the Committee on Graduation must bear the approval of the class officer, and the Librarian's receipt for the thesis fee.

The Committee on Graduation will not receive a thesis from any student until he has received credit for thirty-four college courses.

Graduation theses must be in the hands o. the Committee on Graduation at least thirty days before the date on which the degrees are to be conferred.

Prizes.

All contestants in any of the oratorical contests of the University must have received credit for at least one course in Elccution.

No composition, in whole or in part, shall be submitted in competition for two prizes.

Only undergraduate students are eligible for any prize offered.

No student shall be eligible to enter any contest who has not been a resident student in this University for at least one quarter preceding the quarter in which the contest is to be held, and who is not a resident student in good standing in the University in the quarter in which the contest is held.

No successful contestant may become a second time a competitor for the same prize.

The following prizes are open to students in various departments of the University.

I. The Wiles Prizes in Oratory.

Mr. John W. Wiles, A.B., of the class of 1894, a citizen of Morgantown, has offered the following prizes to be awarded each year for excellence in original oratory:

(a) A cash prize of one hundred dollars to the competitor who is adjudged best in original oratory;

(b) A gold medal to the competitor who is adjudged second best in original oratory.

The conditions upon which the awards will be made are as follows:

1. All members of the graduating classes who wish to take part in the contest shall hand their names to the President of the University not later than the first Monday in March.

2. There will be a public preliminary contest on the evening of the third Friday in April.

3. For this preliminary contest the judges shall be selected by the President of the University.

4. The judges shall select for the final contest not more than five speakers who, in their judgment, shall excel.

5. No oration on either preliminary or final contest shall be more than fifteen minutes long.

6. The judges shall grade each oration on a scale of fifty for thought and composition and fifty for delivery.

7. For the final contest, the President of the University shall select three judges who are not connected with the University, and, if possible, non-residents of West Virginia, and of different professions.

8. There shall be no conference between the judges after either preliminary or final contest. Each judge shall be waited upon after the contest by a committee of two, chosen by the contestants. This committee shall average the grades of the judges, and from these grades make up the final result.

9. The contestants who are selected for the final contest may

present for the final contest either the same oration they presented in the preliminary contest, or a new one.

10. All contestants in the preliminary contest shall submit typewritten copies of their orations to the judges on the preliminary contest at least one week before the preliminary contest, and the contestants in the final contest shall submit typewritten copies of their orations to the judges on the final contest at least two weeks before the final contest.

11. The places of the contestants on the program shall be decided by lot in both preliminary and final contest.

12. No contestant shall enter the final contest who has failed to make seventy-five in a possible one hundred in the preliminary contest.

13. Should no contestant make at least ninety in a possible one hundred in the final contest, no money will be paid by Mr. Wiles, but the contestant making the highest grade will be given a gold medal, and the one making the next highest grade will be given a silver medal.

II. The Scott Prize in Declamation.

A prize of one hundred dollars will be awarded each year by Hon. N. B. Scott, United States Senator from West Virginia, to the woman student in any department of the University who excels in declamation.

The conditions on which the award will be made are as follows:

1. All women in the University who wish to take part in the contest shall hand their names to the President of the University not later than the second Monday in April, and no one shall be allowed to enter this contest after that date.

2. If not more than seven wish to contest, there will be no preliminary contest.

3. If more than seven wish to contest, there will be a preliminary contest on the third Saturday in April.

4. At the preliminary contest there shall be present only the three judges who shall be selected by the President of the University.

5. The judges shall select for the final contest the seven speakers who, in their judgment, shall excel in declamation.

6. The final contest shall be held on the Monday evening of Commencement week.

7. For the final contest three judges shall be selected by the President of the University.

8. The contestants may present either the same declamation presented in the preliminary contest, or a new one.

9. Each contestant shall submit her selection to the Professor of Elocution for approval.

10. No declamation shall take longer than twenty minutes in delivery.

11. No one who has given public recitals, or taken part in public performances, receiving pay therefor, shall be eligible to compete. Such pay shall not be construed to mean prizes.

12. No graduate of a recognized school of oratory shall be eligible to compete.

III. The Inter-Society Prize.

Prizes aggregating one hundred and fifteen dollars are awarded annually by the Board of Regents of the University to the literary society whose representatives excel in declamation, original oratory, essay writing, and debate. The conditions on which the awards are made are as follows:

1. The inter-society contest shall hereafter consist of two orations, two essays and two declamations, and there shall be a separate evening for the joint debate between representatives of the two literary societies.

2. All undergraduate members of the Parthenon and Columbian Literary Societies in attendance at the University shall be eligible contestants on the inter-society contest and the joint debate.

3. Each literary society shall, at its last regular meeting of the fall quarter, select the two debaters who shall represent it in the annual joint debate, and the declaimer, essayist and orator who shall represent it in the annual inter-society contest.

4. The joint debate shall take place on Thursday evening of the week before Commencement.

5. In the joint debate no debater shall speak longer than thirty minutes.

6. The inter-society contest shall take place on Tuesday evening of Commencement week.

7. In the inter-society contest the orations, essays and declamations shall not exceed twenty minutes in length each.

8. In the joint debate the question for debate shall be chosen in the following manner:

In the scholastic year 1900-1, and in every alternate year thereafter, the representatives of the Parthenon Literary Society shall propose to the representatives of the Columbian Literary Society the question for debate not later than January 6, and the representatives of the Columbian Literary Society shall announce their choice of the affirmative or the negative side of the question not later than January 20. In the scholastic year 1901-2, and in every alternate year thereafter, the representatives of the Columbian

Literary Society shall, in like manner, not later than January 6, propose the question for debate, and the representatives of the Parthenon Literary Society shall decide not later than January 20, whether they will affirm or deny in the discussion of the question proposed.

9. Fifty dollars from the Current and Contingent Fund shall be given to the society whose representatives win the joint debate.

10. Thirty dollars shall be given to the society whose representative in the inter-society contest shall excel in oratory.

11. Twenty dollars shall be given to the society whose representative in the inter-society contest shall present the best essay.

12. Fifteen dollars shall be given to the society whose representative in the inter-society contest shall excel in declamation.

13. The decisions in the joint debate and inter-society contest shall be made by three judges for each contest. These judges shall be selected by the Committee on Prizes and Contests. It shall be the duty of this committee to arrange all matters of detail connected with these contests. They shall be judges of the eligibility and election of all contestants, arrange the programs, decide upon the dates, and lay down whatever additional rules may be necessary for the proper management of these contests.

IV. The Regents' Prize in Composition.

A prize of twenty-five dollars is awarded annually by the Board of Regents of the University to the student in any of the regular college courses who shall write the best essay on a topic selected by the Committee on Prizes and Contests. The subject for the year 1900-1901 is: "The Training of Teachers in West Virginia."

Conditions on which these prizes are awarded are stated below.

V. The Women's Christian Temperance Union Prize.

A prize of twenty-five dollars will be awarded by the Woman's Christian Temperance Union of Morgantown to the student who shall write the best essay on "The Passing of Alcohol."

The conditions on which the prize is awarded are given below.

For 1901, The Woman's Christian Temperance Union of Morgantown offers a prize of twenty-five dollars for excellence in original oratory.

The conditions upon which the award will be made are as follows:

1. The orations shall advocate some phase of temperance reform.

2. All students in the University are eligible to compete for this prize under the rules and regulations established by the Committee on Prizes and Contests.

3. Students who desire to take part in the contest shall hand their names to the Committee on Prizes and Contests not later than the first Monday in April.

4. The Committee on Prizes and Contests shall decide whether a preliminary contest is necessary, and, if so, shall determine the date and arrange the details.

5. The Committee on Prizes and Contests shall select the judges for both preliminary and final contests and make all arrangements regarding the details of both contests.

6. The prize will not be offered unless there are at least six contestants.

Conditions of Awarding Essay Prizes.

The following rules and regulations will govern the award of prizes for essays:

1. No limit is set to the length of the essays submitted in competition for these prizes.

2. All essays must be typewritten with black non-copying record ink, on Crane's Japanese linen paper, of quality twenty-four pounds to the ream, folio size. This paper, of right quality and size, viz., 8x10 inches, may be obtained at the University book room, or at any book-store in Morgantown. A margin of one and one-fourth inches must be left at the left edge of each sheet, and the margin must be three-fourths of an inch on the other edges. The title page will follow, *mutatis mutandis* the sample title page on the bulletin board in the Library.

3. On the title page of each essay must be written an assumed name, and under cover with the essay must be sent a sealed letter containing the true name of the writer and superscribed with his assumed name.

4. The copies of all essays submitted for these prizes become the property of the University Library, and the essay which receives a prize shall have endorsed upon it a certificate of that fact.

5. The essays submitted for these prizes must be deposited not later than the first Saturday in June with the Committee on Prizes and Contests. This committee will appoint three judges for each prize, and the prize will be awarded to the writer of the essay declared by two of the judges to be the best.

6. The decision of the judges will be announced by the President of the University at Commencement.

VI. The Elkins Prizes in Greek.

A prize of sixty dollars to the student who makes the highest average grade in the first college year's work in Greek, and a prize of forty dollars to the student who makes the next highest grade in

the same work, have been offered by Hon. Stephen B. Elkins, United States Senator from West Virginia.

The conditions on which the awards will be made are as follows:

1. No student will be eligible to these prizes who has not been in the Greek class during the entire three quarters of the year (fall, winter, and spring).

2. In making the awards equal consideration will be given to the daily class work and to the examinations of the entire year.

3. The awards will be made by a committee consisting of the President of the University, the Professor of Greek and the Assistant in Greek.

4. The awards will be announced at Commencement.

VII. The Jas. F. Thompson Prize in Anatomy and Physiology .

A prize of twenty-five dollars, the gift of Mr. Jas. F. Thompson, of Martinsburg, W. Va., will be awarded annually to the undergraduate student who does the best work in Anatomy and Physiology for three quarters. The decision will be announced at Commencement.

VIII. The Regents' Prizes in Declamation.

The Board of Regents of the University annually awards to the student in the Preparatory School who excels in declamation, a prize of fifteen dollars, and prizes of ten dollars and five dollars respectively to the contestants who rank second and third. The conditions under which the awards are made are as follows:

1. Students in the Preparatory School who desire to compete shall hand in their names to the Principal of the Preparatory School not later than April 1.

2. If not more than nine students desire to compete there will be no preliminary contest, but if more than nine desire to contest, the Principal of the Preparatory School will arrange for a preliminary contest to select the nine who shall excel in declamation, and these nine shall take part in the final contest.

3. The final contest will be held on the Saturday evening preceding Commencement.

4. The judges of this contest shall be selected by the Principal of the Preparatory School.

IX. The Aurora Grange Prize.

A prize of ten dollars is awarded annually by Aurora Grange No. 372, to any student enrolled in the College of Agriculture for the current year who shall write the best essay on a topic selected by the Grange. The subject for 1900-1901 is: "Influence of Heredity on the Improvement of Breeds."

The conditions on which this prize is awarded are the same as those governing the other essay prizes, except that the judges shall be selected by the Grange.

Fellowships.

The Board of Regents has established ten University Fellowships, for the purpose of encouraging advanced study and promoting higher scholarship. The regulations governing them are as follows:

1. Each Fellow will be paid $300 annually, and will be excused from the payment of all University fees.

2. The Fellowships will be awarded by the President of the University to candidates for advanced degrees who are graduates of West Virginia University, or other institutions of equal grade.

3. All Fellowships will be filled each year. Fellows may be reappointed for one additional year only.

4. Candidates for Fellowships will send their applications to the President of the University, with evidences of merit, attainments, and ability, not later than May 1 of each year. The appointments will be announced at Commencement.

5. Applications must be accompanied by evidences of scholarship, ability, and general worthiness, such as theses (whether prepared for this or other purposes), published writings, testimonials from instructors, outline of educational course pursued, special distinctions gained, and the like. Applications for reappointment should contain a full account of the work of the preceding year. Applications to receive attention must contain a definite statement of the special studies which the applicant intends to pursue.

6. Each Fellow will pursue his studies under the direction of the professor or professors in charge of his special studies. Assignment of University services to each Fellow will be made by the President in consultation with the head of the department to which the Fellow has been assigned. The work assigned will be equivalent to one hour of teaching daily, or the supervision of laboratory work for one laboratory period daily.

In making appointments to these Fellowships, special weight is given to theses indicating the candidates' ability to do independent work. The candidate for a Fellowship must show proficiency already attained in the department of study in which he applies for a Fellowship. Preference will be given, in making these appointments, to those students who have taken their major work, including a thesis, in the department in which they apply, and who intend to make that subject their life work. It is very desirable that the student should have spent a year in resident study after receiving his Bachelor's degree.

Each Fellow will make to the President, at the beginning of

each quarter, a written report, approved by the head of his department, indicating the courses chosen by him as a student, and the work assigned to him as an officer of the University, for the current quarter and for the previous quarter.

Discipline.

The rules and regulations which students are required to observe are few, simple and reasonable,—punctuality and regularity in attendance upon all required exercises; reasonable diligence in the performance of the work prescribed; abstinence from drinking, gambling and like gross vices; and civil, orderly conduct generally.

Students who cannot, or will not, comply with these requirements will not be allowed to remain in the University.

All matters of discipline are in charge of the Committee on Student Affairs.

Special Lectures.

The University furnishes a series of public lectures by specialists from other institutions, and all students in the University are invited to attend them.

Chapel Exercises.

The regular University work of each day of the week, except Saturday, begins with Chapel exercises. These exercises consist of singing, reading the Scriptures, and prayer. The service is conducted by the Chaplain of the University, or by some one designated by him. The singing is in charge of the Director of the School of Music. In addition to these exercises, the Chaplain delivers a course of lectures each quarter on such subjects as the origin, structure, literature, history, languages, versions, institutions, personages, influences, etc., of the Bible. Students who enroll for these courses and comply with such requirements as may be prescribed by the Chaplain, are given credit for one-third of a course for each quarter. Appropriate text-books are used in addition to the lectures.

Attendance upon Chapel exercises is voluntary; but patrons of the University who wish the students under their charge to attend these exercises may have them enrolled by making such desire known to the University Chaplain.

Church Halls.

Several religious denominations have manifested an active interest in the question of establishing church halls in Morgantown

for the purpose of providing homes for students during their stay in the University.

One such hall has been in operation for six years, the Episcopal Hall, founded by Rt. Rev. Geo. W. Peterkin, Bishop of West Virginia. Committees representing several other denominations have under advisement the founding of halls of a similar nature, or intended to accomplish the same purpose. The Episcopal Hall was established in 1895 by Bishop Peterkin to provide a home for young men studying for the ministry under his direction, and for any other students of the University who may choose to reside there. He did this in preference to establishing a separate church college, which would have necessitated the duplication of the plant already established at the University. The Hall is a comfortable, home-like building of forty rooms, heated by steam and lighted by electricity, under the care of a proctor, who resides in the Hall. The primary object of the Hall is to secure for the student not only the attractive corporate side of college dormitory life, but also some of the comforts of home life.

The charge for board and room per week is $3.50. A student may obtain the right to room alone by paying $3.75 per week.

University Fees.

Except in the School of Music and in the Department of Fine Arts, tuition is free to West Virginia students.

The tuition charged students from other states is:

$5.00 per quarter in the Preparatory School.

$5.00 per quarter in the Commercial School.

$8.00 per quarter in the College of Law.

$12.50 per quarter in the other colleges.

The matriculation fee is $5.00, payable upon entering the University by all students except cadets and those whose work is exclusively in Music or Art. Unless a student remains out of the University more than three years, the matriculation fee is paid but once by each student.

The contingent fee is $2.00 per quarter, payable at the beginning of the quarter by all students except cadets and those whose work is exclusively in Music or Art.

The diploma fee is $5.00, payable upon graduation by all students. This fee is to cover the cost of the diploma.

Students in laboratory courses in Chemistry and Anatomy pay the following fees, to cover the cost of material used:

$2.00 per quarter in General Chemistry.

$6.50 per quarter in Analytical Chemistry.

$5.00 per quarter in Anatomy.

The School of Music and the Department of Fine Arts are partly supported by the special fees charged. These fees are mod-

erate, and set forth in connection with the announcements of these departments.

Board and Lodging.

Board and lodging together may be obtained in Morgantown for $3.00 per week. Most students, however, pay from $3.25 to $3.50 per week. Furnished rooms may be obtained in private families at from $1.00 to $1.25 per week. Board in students' clubs costs from $2.00 to $2.50 per week; in private families, from $2.50 to $3.00.

Estimated Expenses for a Year of Nine Months.

Room Rent	$36.00	to	$ 45.00
Board	72.00	to	108.00
Washing	9.00	to	13.00
Text-books	8.00	to	30.00
Contingent fees	6.00	to	6.00
	$131.00		$202.00

To this estimate must be added matriculation and tuition fees, in the case of students who are required to pay them, and also traveling expenses, clothing, and miscellaneous expenses, which depend largely upon the tastes and habits of individual students.

Text-books are kept for sale in the University book room, and are furnished to students at cost.

State cadets are furnished their text-books, stationery and uniforms free, and are exempt from the payment of matriculation and contingent fees.

Approved Boarding and Rooming Places.

A committee of the Faculty has general oversight of the question of boarding and rooming, and will not only help the students to find desirable places, but will see that no student rooms or boards at an objectionable place. At present the Committee on Approved Boarding and Rooming Places consists of Professors Friend, Willey, Reynolds, Whitehill, and Jones.

Students in search of rooms or boarding places and proprietors of lodging or boarding houses are requested to confer with the members of this committee, who will prepare and publish regularly a list of approved boarding and rooming places for students.

Accredited Preparatory Schools.

The University is a part of the public school system of the State, and desires that its relations with the other parts of the system be as close and intimate as possible. The Faculty Committee

on Accredited Schools consists of Professors Hodges, Reynolds, Whitehill, J. S. Stewart, and Barbe. Certificates from accredited schools will be accepted by the University in place of entrance examinations in preparatory subjects upon which students have passed at such schools. School superintendents, principals, or boards, desiring to have their schools placed on the accredited list, should make application to Professor Thos. E. Hodges, Chairman of the Committee on Accredited Schools, and the application will receive prompt and careful attention. Approved secondary schools outside of West Virginia will, upon application, be placed on the accredited list on the same conditions as West Virginia schools. Students who come to the University from accredited schools are required to present certificates indicating the work they have completed. These certificates must be on a special form, copies of which may be obtained at any time upon application to the President of the University, or Chairman of the Committee. A supply should be kept constantly on hand by the Principal of each accredited school.

The list of accredited schools at present is as follows:

Allegheny Collegiate Institute,.....Alderson, W. Va.
Barboursville College,.....Barboursville, W. Va.
Bloomsburg State Normal School,.....Bloomsburg, Pa.
Broaddus Classical Institute,.....Clarksburg, W. Va.
Charleston High School.....Charleston, W. Va.
Charles Town High School.....Charles Town, W. Va.
Clarksburg High School,.....Clarksburg, W. Va.
Connellsville High School,.....Connelsville, Pa.
Ceredo High School,.....Ceredo, W. Va.
Davis Free School,.....Piedmont, W. Va.
Grafton High School,.....Grafton, W. Va.
Greensburg High School,.....Greensburg, Pa.
Huntington High School,.....Huntington, W. Va.
Hinton High School,.....Hinton, W. Va.
Martinsburg High School,.....Martinsburg, W. Va.
Morgantown High School,.....Morgantown, W. Va.
Moundsville High School,.....Moundsville, W. Va.
Mt. Wesley High School,.....Berkeley Springs, W. Va.
New Cumberland High School,.....New Cumberland, W. Va.
New Martinsville High School,.....New Martinsville, W. Va.
Parkersburg High School,.....Parkersburg, W. Va.
Pittsburg Central High School,.....Pittsburg, Pa.
Pittsburg Academy,.....Pittsburg, Pa.
Potomac Academy,.....Romney, W. Va.
Ravenswood High School,.....Ravenswood, W. Va
Salem College,.....Salem, W. Va.
State Normal School,.....Athens, W. Va.

State Normal School,.....Fairmont, W. Va.
State Normal School,.....Glenville, W. Va.
State Normal School,.....Huntington, W. Va.
State Normal School,.....Shepherdstown, W. Va.
State Normal School,.....West Liberty, W. Va.
Southwestern State Normal School,.....California, Pa.
Scottdale High School,.....Scottdale, Pa.
Steubenville High School,.....Steubenville, Ohio.
Uniontown High School,.....Uniontown, Pa.
West Virginia Conference Seminary,.....Buckhannon, W. Va.
Western Pa. Classical and Scientific Institute,....Mt. Pleasant, Pa.
Wellsburg High School,.....Wellsburg, W. Va.
Wheeling High School,.....Wheeling, W. Va.

Matriculation and Registration.

Before being admitted to any class, students matriculate at the President's office, room 10, Science Hall. All students are required to register once every year.

THE UNIVERSITY LIBRARY.

Library Staff.

ELIZA JANE SKINNER, Librarian.
ANNA BANCROFT WHITE, A.B., Assistant.
WILLIAM WINFRED SMITH, Assistant.
CHARLES WILBUR STUMP, Assistant in Law Library.

Library and Reading Room.

The Library is open from 7:45 A. M. to 10 P. M., every day except Sunday and the legal holidays,—Fourth of July, Thanksgiving Day, Christmas Day, and New Year's Day. On Sunday the Library is open for reading and the consultation of books from 2 P. M. to 5 P. M. No books are given out on Sunday.

All officers and students in all departments of the University have free access to the Library, and may draw books for home use. Two volumes may be taken out at a time and retained for two weeks. Upon request of instructors, books used as collateral reading in University courses are reserved for use in the Library.

Students have free access to the shelves, and are urged to avail themselves of the opportunity thus offered to become familiar with the standard works in each department of learning.

The Library may be consulted by all persons, whether connected with the University or not, and, under special regulations, the privilege of borrowing books is extended to those not connected with the University.

The Library contains about 17,500 volumes, exclusive of unbound pamphlets and duplicates. Of this number 3,000 volumes have been added during the past year.

By classes the number of bound volumes is as follows:

General Works	850
Philosophy	350
Religion	575
Sociology	2,150
Philology	250
Natural Science	1,950

Useful Arts	1,400
Fine Arts	275
Literature	3,000
History (including Biography)	2,500
Government publications	2,700
Law Library	1,500

Bibliographic aids have been added and the attendants in charge are ready at all times to give assistance in research and investigation. The value to the University student of a knowledge of the proper use of books is inestimable. It is the aim to develop this line of instruction, and to make the Library the attractive working center of the University.

The reading room occupies a part of the room devoted to the Library, and is provided with the current newspapers and periodicals, both general and technical. The periodical list includes about one hundred and fifty of the best magazines and papers, and the leading county papers of the State. The room is well lighted, and is free to all who care to use it.

New Library Building.

A handsome new stone Library building is being erected and will soon be ready for use. It will supply one of the University's greatest needs.

THE COLLEGE OF ARTS AND SCIENCES.

Staff of Instruction.

POWELL BENTON REYNOLDS, D.D., Acting President of the University, and Professor of Philosophy.

WAITMAN BARBE, A.M., Assistant to the President, and Associate Professor of the English Language and Literature.

ALEXANDER REID WHITEHILL, Ph.D., Professor of Chemistry.

SAMUEL B. BROWN, A.M., Professor of Geology and Mineralogy.

——————————, Professor of Pedagogy.

JAMES SCOTT STEWART, M.S., Professor of Mathematics.

ROBERT WILLIAM DOUTHAT, Ph.D., Professor of the Latin Language and Literature.

THOMAS EDWARD HODGES, A.M., Professor of Physics.

HENRY SHERWOOD GREEN, A.M., Professor of the Greek Language and Literature.

RICHARD ELLSWORTH FAST, LL.B., Ph.B., Professor of American History and Political Science.

FREDERICK WILLIAM TRUSCOTT, Ph.D., Professor of Germanic Languages and Literatures.

CHARLES HENRY PATTERSON, A.M., Professor of the English Language and Literature.

CHARLES CHOLLET, A.M., Professor of Romance Languages and Literatures.

JAMES MADISON BURNS, U.S.A., Professor of Military Science and Tactics and Commandant of Cadets.

LUCY CELESTE DANIELS, Ph.M., Associate Professor of European History.

——————————, Professor of Economics and Sociology.

FREDERICK LAWRENCE KORTRIGHT, Ph.D., Assistant Professor of Physiological Chemistry.

EDWIN BINGHAM COPELAND, Ph.D., Professor of Botany.

HANNAH BELLE CLARK, Ph.D., Assistant Professor of Domestic Science, and Dean of Women.

JOHN BLACK JOHNSTON, Ph.D., Assistant Professor of Zoölogy.

DANIEL WEBSTER OHERN, A.M., Assistant in Greek.

SIMEON CONANT SMITH, A.B., Assistant in Rhetoric and Elocution.

ALBERTA CLAIRE McVICKER, A.B., Fellow in English Literature.

JEANNETTE EVA CARTER, Ph.B., Fellow in Romance Languages.

ALLEN WILSON PORTERFIELD, A.M., Fellow in German.

ELEANOR BROWN MORELAND, A.B., Fellow in Domestic Science.

GEORGE WASHINGTON CONLEY, A.B., Fellow in Physics.

BERTHA CLELAND BROWNING, A.B., Instructor in English.

Entrance Subjects and Requirements.

For meeting the requirements for admission to the Freshman Class candidates are offered a choice of seventy-seven courses in thirty subjects. A "course" represents the amount of work done by a class meeting five times a week for one quarter (twelve weeks). The entrance subjects are all reduced to the unit of a course, and placed on exact equality. Thirty-nine courses will be accepted for admission in full standing, and these may be selected by the candidate from among the following seventy-seven courses:

1.	English Grammar,	2 courses;
2.	English Composition and Rhetoric,	5 courses;
3.	English Litertature,	2 courses;
4.	Latin,	9 courses;
5.	Greek,	6 courses;
6.	French,	6 courses;
7.	German,	9 courses;
8.	Greek History,	1 course;
9.	Roman History,	1 course;
10.	Mediaeval History,	1 course;
11.	Modern History,	1 course;

12.	English History,	1 course;
13.	American History,	1 course;
14.	Civil Government,	1 course;
15.	Arithmetic,	1 course;
16.	Elementary Algebra,	3 courses;
17.	Plane Geometry,	2 courses;
18.	Plane Trigonometry,	1 course;
19.	Advanced Algebra,	1 course;
20.	Solid Geometry,	1 course;
21.	Botany,	2 courses;
22.	Physics,	2 courses;
23.	Chemistry,	3 courses;
24.	Zoölogy,	3 courses;
25.	Physical Geography,	1 course;
26.	Physiology,	1 course;
27.	Astronomy,	1 course;
28.	Drawing,	3 courses;
29.	Mechanic Arts,	3 courses;
30.	Military Science,	3 courses.

After June, 1902, all candidates for admission must have completed the common branches, Arithmetic, Elementary English, and Political and Physical Geography. Six courses in English Composition, Rhetoric, Grammar and Literature are required, and before being admitted to full college standing every candidate must demonstrate his ability to use English well. The remainder of the preparatory work remains elective, except the following numbers of courses are the least and most which will be accepted in the various branches:

	Minimum.	Maximum.
English	6 (Required)	9
Latin	5	9
Greek	3	6
French	3	6
German	3	6
History	2	6
Civil Government	1	1
Elementary Algebra	3	3
Advanced Algebra	1	2
Plane Geometry	2	2
Solid Geometry	1	1
Trigonometry	1	1
Astronomy	1	1
Botany	2	3
Physics	2	3

Chemistry	2	3
Zoölogy	1	4
Physiology	1	1
Drawing	2	3
Mechanic Arts	1	1
Military Science	1	3

Students bringing the full requirements for admission from accredited schools may include single courses in Chemistry and Physics, if they have been able to get so much and no more.

The six courses which may be offered in history are arranged in three groups: 1. Greek and Roman; 2. Mediaeval and Modern; 3. English and American. If but two courses, the minimum requirement, are offered, they must be either the two of the first group, or the two of the third group.

This modification of the entrance requirement is not fully operative until June, 1902, but candidates for admission in the meantime will be expected to enter under it as far as possible.

Entrance Examinations.

The schedule for entrance examinations for the year 1900-1 is as follows:

Monday, September 16, 1901.

8:00 A. M., English Grammar;
English Composition and Rhetoric;
English Literature;
9:00 A. M., Latin;
10:00 A. M., Greek;
11:00 A. M., French;
2:00 P. M., German;
3:00 P. M., Greek History;
4:00 P. M., Roman History;
5 P. M., Mediaeval History.

Tuesday, September, 17, 1901.

8:00 A. M., Modern History;
9:00 A. M., English History;
10:00 A. M., American History;
11:00 A. M., Civil Government;
2:00 P. M., Arithmetic;
3:00 P. M., Algebra;
4:00 P. M., Geometry;
5:00 P. M., Plane Trigonometry.

Wednesday, September 18, 1901.

8:00 A. M., Botany;
9:00 A. M., Physics;
10:00 A. M., Chemistry;
11:00 A. M., Zoölogy;
2:00 P. M., Physical Geography;
3:00 P. M., Physiology;
4:00 P. M., Astronomy;
5:00 P. M., Drawing.

The Committee on Admission and Advanced Standing will not issue cards for special entrance examinations after the dates set for regular examinations at the beginning of the Fall Quarter until the applicant presents to the committee the Treasurer's receipt for a fee of two dollars for such special entrance examination.

Admission on Certificate.

Students who have completed thirty-nine of the above courses in any of the West Virginia State Normal Schools, or any of the other schools that are accredited by the Faculty Committee on Accredited Schools, will be admitted without examination, and permitted to enter upon such undergraduate work as their preparatory studies contemplated, provided they bring with them properly certified statements from their previous instructors regarding the work they have done. These statements must be passed upon by the Faculty Committee on Admission and Advanced Standing.

As no student, with the exception of a student over twenty-one years of age, is admitted to the University, or Preparatory School, except to the first class in the Preparatory School, in any other way than by examination or certificate, students intending to enter the University on certificate will insure immediate admission to their classes by bringing credentials that state in full the courses pursued, the number of weeks given to each course, the number of recitations a week, and the length of each recitation period. Blank sheets for this purpose will be furnished on application to the President.

Especial attention is called to the fact that students who come without credentials and do not take the entrance examinations can be classified only in the first year of the Preparatory course, and cannot be admitted to any but Preparatory classes, taking the first course in each subject.

Degrees.

Honorary Degrees.

No honorary degrees are conferred.

Bachelor of Arts.

The degree of Bachelor of Arts is conferred upon any student who satisfies all entrance requirements and satisfactorily completes forty-two college courses, of which at least ten courses (including a thesis) are in some one department of study, selected by the student as his major subject or specialty. The professor in charge of the student's major work will act as the student's class officer and adviser, and will have authority to require the completion of the major subject and also such minor subjects in other departments as he may consider necessary or advisable collateral work; but such minor requirements will not exceed six courses. With the exception of these major and minor courses, all work is elective, and the student may, in consultation with his major professor, freely choose any subject taught in the University which his previous studies have prepared him to undertake; but the recommendation of his major professor is necessary to graduation; and no degree will be conferred upon any student who has not received credit for at least forty-two full college courses, and spent at least one University year (three quarters) in resident study at this University.

Master of Arts.

The degree of Master of Arts is conferred upon graduates of West Virginia University or other institutions of equal grade upon the following conditions:

1. The candidate must pursue studies in residence at this University for at least three quarters.

2. The candidate shall select one major subject in which he must have done at least twelve full courses, undergraduate and graduate, exclusive of theses, before being admitted to examination for the Master's degree. During his graduate residence the candidate must do work in his major subject at least equivalent to six full college courses.

3. In addition to the work in his major subject, the candidate shall present sufficient work in an allied subject (or subjects) to make up nine full courses of graduate work.

4. The candidate shall present a thesis showing marked attainment in his major subject. The thesis shall be submitted for the approval of the Committee on Graduate Study at least four weeks previous to the Convocation at which the degree is expected. This committee may appoint three professors to examine and report upon the merits of the thesis.

5. If the thesis is approved, two typewritten or printed copies shall be deposited in the University Library, at least two weeks before the degree is to be conferred.

6. Not later than the close of the second week of residence, the

candidate must submit to the Committee on Graduate Study for approval* a full and definite statement of the work which he intends to pursue, together with an indication of the subject to be investigated for the thesis.

7. At the close of his work the candidate shall pass an examination conducted by the professor in charge of his major subject, together with two other persons, to be appointed by the Committee on Graduate Study. The examination shall be held after the thesis is deposited in the Library, on a date to be determined by the professor in charge of the major subject.

8. After July 1, 1901, no work done before graduation will be credited toward the Master's degree.

9. In case a student has failed to take the M. A. degree within two years after his course of study has been approved, his candidacy shall lapse and can be renewed only upon a new application to the Committee on Graduate Study.

Doctor of Philosophy.

The degree of Doctor of Philosophy is conferred upon Masters of Arts of West Virginia University, or holders of an equivalent degree, upon the following conditions:

1. Candidates must spend at least two years in resident study at some University, and must be in residence at this University during the last three quarters before receiving the degree. The requirements of time are, however, wholly secondary. The degree will not be given for the completion of prescribed work, nor for study during a stated period, but only on the ground of long study and high attainments in one branch of learning.

2. Candidates shall choose a major subject and cognate minor work. To the latter they will devote not more than one-third of their time.

3. The candidate must prepare a dissertation on some phase of his major subject, which shall give evidence of his power of independent investigation, and shall be a contribution to knowledge. The thesis must be in creditable literary form, although for acceptance it will depend chiefly on its subject matter.

4. Not later than nine months before the date on which the candidate expects to receive the degree, he shall file with the Committee on Graduate Study the subject of his thesis, with the approval of his major professor, and a full statement of his work in candidacy for the degree; and shall satisfy this Committee of his ability to use French and German in his investigation.

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*The committee will approve only courses of an advanced character, and acts upon each individual case on its own merits.

5. The thesis shall be presented to the Committee on Graduate Study at least two months before the date on which the degree is expected. It will be referred to a Committee of three, one of whom shall be a person not connected with this University. If the thesis is approved the candidate shall proceed to an examination, which shall be conducted by the instructors in charge of his subjects, with the aid of the same committee of three and the Committee on Graduate Study. The date of the examination shall be determined by the Committee on Graduate Study.

6. If the candidate satisfactorily passes the examination he shall, before receiving the degree, deposit with the librarian of the University a typewritten or printed copy of the thesis.

7. The publication of the thesis is regarded as a part of the evidence of the candidate's fitness to receive the degree. If the thesis cannot be published before the conferring of the degree, the candidate must either furnish the Committee on Graduate Study evidence of completed arrangements for publication, or deposit with the Treasurer of the University a sufficient sum to cover the cost of publication in approved form. When the thesis is published one hundred copies shall be presented to the University library, and the deposit made with the Treasurer will be returned.

Special Rules and Regulations.

Classification and Promotion.

1. No student shall be classified as a Freshman who is conditioned in more than three Preparatory courses.

2. No student shall be classified beyond the Freshman Class until all Preparatory conditions are removed.

3. No student shall be classified as a Sophomore who has not received credit for at least seven and a half college courses.

4. No student shall be classified as a Junior until he has received credit for at least nineteen college courses.

5. No student shall be classified as a Senior until he has received credit for at least thirty college courses.

Maximum Work.

No student may take more than four courses, nor more than three courses two quarters in succession, without special permission of the Committee on Registration.

Students who are carrying four full courses, in accordance with the regular rule or by special permission of the Committee on Registration, shall not receive credit for fractional courses in addition thereto; provided, however, that any student may receive credit for the fractional courses offered in Chapel Lectures, or Military, in addition to his other work.

Grades and Standing.

1. Any cadet, who upon the aggregate of all his studies during any quarter, shall fail to attain the minimum average of seventy upon a scale of one hundred, shall forfeit his cadetship; but such forfeiture may be relieved by order of the Committee on Scholarship for good cause shown.

2. Any student, who upon the aggregate of. all his studies during any quarter, shall fail to attain the minimum average grade of sixty upon a scale of one hundred, shall be suspended from the University for such a time as the Committee on Scholarship may designate; but such suspension may be relieved by order of the Committee for good cause shown.

3. In case of a student failing to report to classes promptly at the beginning of a quarter, the following rule shall apply: For less than one week's absence there shall be a deduction from the student's average standing of two per cent. for each exercise missed; for absence of one week or more there shall be a deduction of one-sixth of the credit in that course for the quarter for each week missed; such deduction in standing or credit to be made by the instructor. In case of new students, the deduction in course credit only shall be made.

The first two courses in college rhetoric are to be included in the stated prerequisites to the fourth quarter of college work in each department.

Every student on entering the University must file his application for all credit that he feels entitled to for work done elsewhere with the Chairman of the Committee on Admission and Advanced Standing. His credentials must be presented so that the matter may be settled during his first quarter's residence.

The Committee on Admission and Advanced Standing will not consider applications after the student's first quarter of residence.

The Committee on Admission and Advanced Standing gives no credit for work represented by teachers' certificates or Free School diplomas. No college credit is given for work done in schools which are not considered by this Committee to be equal in grade to West Virginia University.

Credit for Physical Training will not be given after June 20, 1901.

After June 20, 1901, credit will be given in music only for courses in the science and history of music,—Harmony, Counterpoint, Theory of Music, Analysis, and the like.

After June 20, 1901, fractional courses in the College of Arts and Sciences will not be recorded; but fractional courses may be taken, and when the credits amount to a full course they will be reported and recorded.

No credit is given, either on admission or toward a degree, for less than three courses in any language.

Every student on entering the University shall elect his major subject as outlined with required correlated subjects.

A student who has taken a degree in this University cannot receive any other degree in less than three quarters of additional work, of not less than three courses in each quarter, and the additional courses must be taken after the granting of the previous degree.

Theses for the Bachelor's degree must be handed to the Committee on Graduation ninety days before the date on which the degree is expected.

Rules for Athletics.

Rlue I. No student shall be allowed to participate in any Inter-collegiate game during the first quarter of his residence at the University; but this shall not apply to any college student who enters a course leading to a degree and takes the required work of that course.

Rule II. No student shall be allowed to participate in any Inter-collegiate game, who has failed to make an average standing of at least 75 per cent. during his last quarter's residence at the University.

Rule III. At least two weeks before any game is to be played the manager of the team to play shall submit to the Athletic Committee a list of the candidates from whom the team is selected; and no person whose name has not been so submitted shall, under any circumstances, play in any game.

DEPARTMENTS OF INSTRUCTION.

In the following announcements, unless otherwise noted, each course described is a full course, the class meeting five times a week, Mondays to Fridays inclusive, through one entire quarter. The quarter during which the course is given, as well as the hour and class-room, are named, whenever possible, at the end of the announcement of each course. All courses are designated by the name of the department and the number of the particular course. Thus the first course in Psychology is known as "Philosophy 1;" the course in Dynamos and Motors is known as "Physics 10," etc. The abbreviations used are: U., University Hall; S., Science Hall; M., Martin Hall; C., Commencement Hall; A., Agricultural Experiment Station; N. F., North Fife Cottage; S. F., South Fife Cottage; G., Gymnasium.

Philosophy.

Professor Reynolds.

In addition to the major of nine courses and a thesis in Philosophy, students making this subject their major must have a minor of six courses in English Literature, or History and Political Science, or Economics and Sociology.

1. **Psychology.** An introductory course devoted to the study of the states of consciousness and mental processes, with an outline of the structure and functions of the nervous system, and the principles and methods of mental training and the application of Psychology to education. Recitations with lectures and notes by the instructor. Fall, 8:00; 23 S.

2. **Logic and Principles of Science.** A study of the processes of conception, judgment and reasoning; nature and laws of experience, induction and the subsidiary processes, such as observation, experiment, classification, and hypothesis; inductive methods; imperfect inductions and fallacies; elements of deduction and formal logic. Recitations, lectures and notes by the instructor, and references to standard authorities. Winter, 8:00; 23 S.

3. **Comparative Psychology.** An outline of physiological psychology; a study of the phases, conditions and progress of mental phenomena and activities, from the lowest to the highest grades in both animals and man. Lectures, recitations and collateral reading. Open to those who have taken Course 1, or its equivalent.

Spring, 8:00; 23 S.

4. **Ethics.** A review of the mental processes that control conduct; fundamentals of morality, the moral faculty, ground of obligation, moral standard, moral law, moral sanction; moral culture; practical morality, personal and social duties. Recitations and notes by the instructor. Fall, 10:00; 23 S.

5. **Applied Ethics.** A study of the relation of ethics to religion, politics, economics and individual and social culture. Lectures, recitations and collateral reading. Winter, 10:00; 23 S.

6. **Comparative Religion.** An outline of the history of the leading religions of the world, and a comparison of the beliefs, forms, practices and influences of the different religions. Recitations, lectures and collateral reading. Spring, 10:00; 23 S.

7. **History of Philosophy.** An introduction to the study of Philosophy, with an outline of the history of the leading philosophers and schools, ancient, mediaeval, and modern. Lectures, with references to best standard works. Fall, 2:00; 23 S.

8. **Mediaeval Philosophy.** Especially the influence of Christianity upon philosophy and vice versa, and the rise and content of Patristic philosophy. Winter, 2:00; 23 S.

9. **The Philosophy of the Renaissance.** A special study of the transition from mediaeval to modern philosophy, the struggle against theological domination and the rise of the natural sciences. Lectures, recitations and collateral reading. Spring, 2:00; 23 S.

Pedagogy.

Professor ————.

1. **Education in West Virginia.** Early schools in this Trans-Allegheny region. Introduction of the Free School system. University and Normal School organization. Discussion of the Irreducible School Fund, the General Fund, the Independent District, Town and City Schools, the County as a unit of taxation, the Central High School, etc. Morgan and Cork's History, with extensive collateral reading. Fall, 8:00.

2. **History of Education.** Development of educational ideas from early periods to the present time. Comparative review of different systems and methods, with especial emphasis upon recent progress. Seeley's "History of Education," with Compayre, Painter and "The Great Didactic" as references. Winter, 8:00.

3. **Educational Psychology.** The human faculties, their laws

of development; the relation between Psychology and Pedagogy; physical basis of education; laws of association and apperception; the feelings and the will; conception, judgment, and reason; character-building. White's "Elements of Pedagogy;" McClellan's "Applied Psychology." Spring, 8:00.

4. **School Organization and Management.** This course will include grading and classifying schools, courses of study, use of text-books, discipline, examinations, proper incentives, school ethics, and many other features of practical pedagogics. "State Manual" and Raub's "School Management," supplemented by lectures, papers, and discussions. Fall, 9:00.

5. **The Science of Education.** Educational theory; the basis of school systems and methods; "What knowledge is of most worth?" Educational values; the practical, the disciplinary, the culture value. Recitations, discussions, lectures and essays. Payne's "Contributions to the Science of Education;" Hinsdale's "Studies in Education." Winter, 9:00.

6. **Methods of Instruction.** The art and science of teaching; general methods, special methods; school-room practice; the recitation and the written exercise; elementary science teaching in secondary schools; the teaching of History, English and Mathematics. Discussions, readings, critiques. De Garmo's "Essentials of Method;" Putnam's "Manual of Pedagogics." Spring, 9:00.

7. **Educational Epochs and Reformers.** Pestalozzi, Froebel, Rousseau, Herbart, Horace Mann, Spencer, Rein, W. T. Harris, and Stanley Hall. No great movement can be thoroughly understood until we study the conditions which lead to its development. Educational History is the history of ideas. The life and work of a reformer is a benediction upon the ages that follow. Biographies, critiques and lectures. Quick's "Educational Reformers;" The Great Educator Series, Winship's "Horace Mann," and other literature of the subject. Fall, 11:00.

8. **School Buildings and Sanitation.** Location of buildings, school grounds, lighting, heating, ventilation, sewerage, furniture, apparatus, and equipment. Illustrations of modern school architecture. Discussions and investigation with reference to the best conditions for district and city schools. A very important course for superintendents and school officers. The general literature of the subject found in the pedagogical library will be studied.

Winter, 11:00.

9. **School Supervision.** State, county, city and district supervision. The relation of tne superintendent to parents and patrons, to the Board and to his teachers; his authority and his moral influence in the community; school visitation and discipline; teachers'

meetings, school reports, and general administrative duties. Payne and Pickard on Supervision. Spring, 11:00.

20. **Seminary.** Discussion of current educational topics and various features of pedagogical science; child study, and original investigation by laboratory methods, as far as such investigation is possible with the means at command.

Half course each quarter.

Sociology.

Assistant Professor Clark.

Students taking Sociology as their major are required to have nine courses and a thesis in this subject. Their minor of six courses may be taken in Economics or Political Science or History or Philosophy.

1. **Anthropology.** An elementary course on man as the unit of society, and on the evolution of society and social institutions. The general purpose of the course is to point out how man has developed into his present social state, what the influences were which caused this devolpment, and how these influences themselves have evolved. The general subjects discussed are: first, the antiquity of man, and the place man occupies in nature; second, the origin and early development of institutions which have made man what he is, and upon which contemporary society is based, such as language and writing, the arts of life and of pleasure, religion and science, mythology and history, the family and social structure. Tylor's "Anthropology," supplemented by lectures and assigned readings.

Fall, 10:00; S. F.

2. **Elements of Sociology.** A course on the structure and functions of contemporary society. Existing society is studied as an objective reality, the student's own world being his laboratory. The course begins with a series of elementary lectures on the methods of scientific social study; the relation of the individual to society; the social organism; the physical and psychical bases of society; the social forces; the field of sociology and its relation to social reform. Meanwhile the individual members of the class have been assigned certain social institutions for personal observation and study, upon which they report fully in the class. The purpose is to bring out prominently the leading features in the associated life of human beings as it actually exists. Lectures, assigned readings and reports. Prerequisite, Economics 2. Winter, 10:00 S. F.

3. **A Historical Survey of Sociological Thought.** This course traces the gradual development of sociological thought from antiquity through the Hebrew, Greek, Roman, and mediaeval writers down to our own times, the larger part of the course being devoted to the

teachings of the most important modern sociologists. Lectures and assigned readings. Prerequisite, Sociology 2. Spring, 10:00; S. F.

4. **Contemporary Charities.** The causes and conditions of poverty, methods of relief, historical and contemporary; special classes, children, the aged, unemployed, defective; charity organization. Lectures, research work. Fall, 9:00; S. F.

5. **The Treatment of Delinquents.** Causes of crime, criminal anthropology, history of methods of treatment, preventive measures, juvenile delinquents, legal factors. Lectures and assigned topics. Winter, 9:00; S. F.

6. **Social Movements of the Nineteenth Century.** A study of organized efforts for social betterment, their principles and results. This includes the investigation of movements affecting every phase of social life, hygienic, economic, artistic, educational, religious. Lectures, readings, and the development of assigned topics. Spring, 9:00; S. F.

7. **The Family.** The historical development of the family: its significance as a social institution; its organization; pathological conditions and suggested remedies for these. Inductive studies, lectures and library work. Winter, 12:00; S. F.

Economics.

Professor ————.

Students who take Economics as their major are required to complete Courses 1-9 inclusive, and to write a thesis in Economics. Their minor must be selected from the following: Sociology, Political Science, History, and Philosophy.

1. **Historical Introduction to Economics.** A course in Economic History, designed to furnish a basis for the study of economic principles. The aim is to familiarize the student with the main facts in the development of modern industrial society before he begins to theorize about them. Gibbins' "Industrial History of England" will be used as a guide with supplementary assigned readings. Fall, 8:00.

2. **Principles of Economics.** An exposition of the fundamental laws of Political Economy. This is an elementary course, prerequisite to all advanced work in Economics. Ely's "Outlines of Economics," supplemented by lectures and assigned readings in the library. Winter, 8:00.

3. **History of Economic Thought.** A sketch of the development of the Science of Economics, from the Greeks to the present day. The different schools of economic thought are considered, and special attention is given to the views of the so-called classical economists,—Adam Smith, Malthus, Ricardo, and John Stuart Mill.

Ingram's "History of Political Economy," supplemented by assigned readings from the works of the authors studies. Prerequisite, Economics 2. Spring, 8:00.

4. **Money and Banking.** This course explains the nature and functions of money, and traces its historical evolution; the different views as to the relation between the money supply, or the monetary policy of government, and the stability of prices, between the money supply and commercial prosperity, and their relation to the question of the obligations between debtor and creditor. The theories of bimetallism, monometallism, independent free coinage and paper fiat money will be examined, and several contemporaneous types of banking systems will be studied, including the scheme for a postal savings bank. Prerequisite, Economics 2. Fall, 9.00.

5. **Public Finance,** with special reference to the financial history and conditions of the United States. The subjects considered are:

(a) Purposes of public expenditures; a brief comparison and criticism of the expenditures of leading cities and countries.

(b) An historical, comparative and critical study of the theory and methods of taxation; a comparison of systems of taxation in different countries; the sources of public revenue; comparison of the merits of different kinds of taxes, particularly of taxes on property, on the manufacture and sale of commodities, on imports, on incomes, on inheritances, and on franchises; Henry George's theory; equalization of taxation. A brief summary of the important legal principles of taxation as shown by leading state and federal cases.

(c) A comparison of the public debts of leading cities and countries, and a consideration of their economic aspects. Prerequisite, Economics 2. Winter, 9:00.

6. **Practical Economic Problems.** A study of proposed schemes of social reform and methods of social improvement. Trades unions, building and loan associations, insurance associations, profit sharing and co-operation. Relation of the state and the municipalities to monopolies. History of the socialistic movement and a discussion of the principles of socialism. The economic influence of education and Christianity. Prerequisite, Economics 2. Spring, 9:00.

7. **The Distribution of Wealth.** A study of the modern distributive process and of the factors which determine the shares in distribution. The course naturally begins with a study of theories of value, followed by a study of theories of rent, interest, wages, profits, etc. In the constructive part of the course, the purpose will be to show how the law of variation observed in the phenomena of value may be traced in the processes which determine the shares in

the products of industry. Lectures and assigned reading to be reported on in class. Fall, 11:00.

8. **Methods of Social Reform.** A study of the fundamental characteristics of industrial society and an examination of the proposed plans of social regeneration: 1. Those which propose the reconstruction of society on a fundamentally different basis from the present; 2. Those which are merely palliative in their aims and tendencies; 3. Those which propose the progressive improvement and perfection of society without destroying its present foundations. Lectures and library work. Winter, 11:00.

9. **Economic Legislation.** In this course each student is expected to study one concrete problem thoroughly, and to present to the class a bill drawn up as if for legislative enactment. Upon presentation, each bill is to be criticised and the framer is to defend it against all comers. After thorough criticism and discussion a vote of the class is taken. Among the subjects so treated will be Trusts, Railway Pooling, Banking, the Standard of Value, Employer's Liability, Factory Inspection, Tramps, Strikes, etc. Spring, 11:00.

Political Science.

Professor Fast, Professor Johnson, and Mr. Poe.

A reading knowledge of Latin and French text is expected in the advanced courses, and a similar knowledge of German and Spanish will be of advantage. Under existing conditions it is recommended that students make Political Science a minor with History as the major; but it may be taken as major. If taken as a major, a familiarity with the outline of general history will be required together with a firm knowledge of modern political history, both European and American. Nine courses will be required if taken as a major and six if taken as a minor. Additional courses will be arranged to meet the requirements of students. With Political Science as a major, minors may be most profitably selected from among the fundamental courses in Economics, Sociology, Philosophy, and Jurisprudence.

1. **Government of West Virginia: Its History and Administration.** This course is intended as a preparation for the more comprehensive study of our American political system, national, state and municipal. Some pieces of written work will be required, prepared from an investigation of material in the Library. Every student admitted to college courses in Political Science must possess a fair knowledge of the government of West Virginia, its history and administration. Entrance credit only will be given for this course. Fast and Maxwell's "History and Government of West Virginia." Spring, 9:00; 6 M.

2. **The Federal Government of the United States.** A study of

the workings of the government and politics of the United States, including a summary of government in general with reference to American conditions. There will be lectures, readings from references, and three special pieces of written work: (a) A study of political methods; (b) the actual workings of some department of the national government; (c) the actual workings of some part of a state or municipal government. Prerequisite, Political Science 1, and a familiar knowledge of American History. Bryce's "American Commonwealth;" Hart's "Revised Suggestions."

Fall, 10:00; 6 M.

3. **Comparative Constitutional Government.** A comparative study of Greek, Roman, and Teutonic polity, of the constitutions of Great Britain, France, Germany, Switzerland, and other leading states of the world, and of the trend in the development of constitutional government. Open to advanced students only. Woodrow Wilson's "The State." Winter, 10:00; 6 M.

4. **Diplomatic History of the United States.** The treaty relations of the United States with foreign powers are studied in detail, including an examination of documents and methods.

Spring, 10:00; 6 M.

20. **Seminary in Politics.** This course is intended for advanced students, and consists of the special study of selected topics. Credit will be given in proportion to the work accomplished.

Fall, Winter, Spring, 4:00 to 6:00; 6 M.

NOTE.—Constitutional and International Law. See announcements in the College of Law.

History.

Professor Fast, Associate Professor Daniels, and Mr. Poe.

The equivalent of the preparatory requirements in Latin and Mathematics is required in all undergraduate work. It is desirable for all students to have a reading knowledge of one if not both of the modern languages (French and German). If made the major nine courses in History will be required. An approved number of minors must be selected from the fundamental courses in Political Science, Economics, Sociology, Philosophy, and English.

For introductory courses in History, see the Preparatory Department announcements.

7. **History of Greece.** This course will trace the history of Greece from the beginning of the Persian wars to the Roman conquest. The mythology of the Greeks, the contributions of earlier nations to the Greek civilization, and the constitutional development of the pre-Persian period, will be treated in preliminary lectures. The student will also be given, by means of lectures and

collateral reading, some acquaintance with the literature, philosophy, and art of the Greeks. Fall, 11:00; 4 M.

8. **History of Rome.** In this course a brief outline will be given of the development of the Roman republic previous to the second century. In tracing the subsequent history of the republic, the following topics will receive special attention: the agrarian question; the development of the Roman provincial system; the influence of Hellenism; the development of the popular and conservative parties, and the party struggles to the death of Cæsar. In the history of the empire, the following topics will be considered: the organization of the empire; Roman citizenship; provincial government; the army; the rise of Christianity; economic conditions; the frontiers, and the contact of the empire with the barbarians.

Winter, 11:00; 4 M.

9. **Mediaeval History.** In this course a study is made of the conditions of the Roman Empire in the third, fourth and fifth centuries, A. D.; of the character and course of the Teutonic migrations; of the development of the new nations; and of the great movements and the institutions of the middle ages.

Spring, 11:00; 4 M.

10. **Modern History.** Beginning with the Renaissance, this course treats of the transition from mediaeval to modern times, as marked by the Renaissance and the Reformation, with the accompanying enlargement of geographical and scientific knowledge; of the religious wars and settlements; and of the political, social, economic and territorial changes of the last four centuries.

Fall, 10:00; 4 M.

11. **History of English Political Institutions.** In this course a study will be made of the development of English political institutions under the following general heads: Anglo-Saxon institutions; feudal development in the pre-Norman and Norman periods; the administrative system under the Norman and Plantagenet kings; the development of the representative system in the thirteenth century, the increase in Parliamentary powers in the fourteenth century, and the causes of decline in the fifteenth century.

Fall, 9:00; 4 M.

12. **History of English Political Institutions.** A continuation of Course 11. The topics to be considered are: the causes and character of the Tudor absolutism; the revival of Parliamentary independence in the latter half of the sixteenth century; the struggle between king and Parliament under the Stuarts; the Revolution of 1688 and the settlement following; the development of ministerial government, and the relation between England and her colonies. Winter, 9:00; 4 M.

15. **The Renaissance and the Reformation.** This course has

the double purpose of showing the development in the later middle ages of those forces which gave to modern civilization its characteristic stamp, and of furnishing the student an opportunity to make himself familiar with the lives and work of the leaders in the literary, artistic and religious movements of the period.

Spring, 9:00; 4 M.

17. **History of the French Revolution and the Napoleonic Wars.** A detailed study of social and political conditions in France prior to the Revolution; of the events of the period from 1789 to 1815; and of the permanent results in France and other European countries. Winter, 10:00; 4 M.

18. **History of Europe since 1815.** In this course a study will be made of the conditions at the beginning of the period, and of the settlements effected by the Congress of Vienna. The history of each country will then be traced with special reference to the working out of the principles of constitutional government and nationality. Spring, 10:00; 4 M.

20. **Seminary in American History.**

21. **American Colonial History (1492-1776).** The primary ob-object of this course is to trace the beginnings of our institutions and the sources of our constitution in the separate settlements; how those settlements were gradually drawn together into colonies; and how the colonies were pieced together into states forming an indissoluble Union. Fall, 9:00; 6 M.

22. **Political and Constitutional History of the United States (1776-1829).** Winter, 9:00; 6 M.

23. **Political and Constitutional History of the United States (1829-1900).** Spring, 9:00; 6 M.

24. **Selected Topics in the Study of American Institutions.** Prerequisites, Courses 21, 22, and 23.

25. **A Study of the Sources and Literature of American History.** Half course. Twice a week Prerequisites, Courses 21, 22, and 23. To be given in alternate years in the Winter Quarter and oftener if demanded.

The method of study is substantially the same in all courses in American History. There will be lectures, reading of selected references to sources and secondary authorities, weekly written papers, and special written work. Clear and idiomatic English is expected in all papers and note-books written by the student. In all courses the student is presumed to be familiar with the general narrative history of the United States. In courses 21, 22, and 23, while special emphasis is laid on political and constitutional history, some attention will be given to social and economic conditions.

Greek Language and Literature.

Professor Green and Mr. Ohern.

Students who elect Greek as a major subject will be required to complete at least nine courses and a thesis in the work of the Department of Greek. They will be required to offer as a minor subject at least six courses in one of the following: Latin, French, Spanish, German, English, Mathematics. The Professor in charge of the Department will advise students individually in the choice of supplementary courses.

For Courses 1 to 6 inclusive, see announcements of the Preparatory School.

7. **Homer's Iliad or Odyssey (Books I, II and III, or IV, V and VI) and Homeric Verse.** All the text is read metrically, some passages are memorized and others are assigned for translation in English verse. Etymology, Mythology and Prosody receive special attention. Seymour's "Iliad." Collateral reading: Jebb's "Introduction to Homer," and Gladstone's "Time and Place of Homer."

Spring, 8:00.

8. **Aeschines Against Ctesiphon.** The aggressions of Philip of Macedon, the political institutions of Greece and the constitution of Athens are studied as an introduction to course 15. "Aeschines against Ctesiphon," by Richardson. Fall, 9:00.

9. **Plato's Apology and Crito.** A study of Athenian methods of judicial procedure and criminal jurisprudence will accompany the reading of the Apology. Dyer's "Apology and Crito."

Fall, 11:00.

10. **Portions of Plato's Charmides, Laches and Lysis.** A brief outline study of the history of Greek Philosophy will be presented with this course, and the philosophic content of the dialogues read will receive careful attention. Newhall's "Charmides, Laches and Lysis." Fall, 11:00.

11 **Greek Literature in English Translation.** A course of lectures tracing the developing of artistic forms of literary expression among the Greeks. Some of the masterpieces of Greek Literature are read in standard English translations. Frequent written reports by members of the class upon assigned readings. This course is intended for mature students of considerable experience in the study of language and literature, but no knowledge of the Greek language is required. Capps' "Homer to Theocritus." Collateral reading: Jebb's Greek Literature. Mahaffy's "History of Greek Literature." Fall, 8:00.

12. **Thucydides. Book V.** In connection with the reading of the text, a study of the political history of Athens and Sparta during the last three decades of the fifth century, B. C., will be undertaken. Fowler's "Thucydides." Book V. Fall, 1902, 8:00.

13. **The Clouds of Aristophanes.** The reading of the text will be supplemented by lectures on the development of Greek Comedy, and the influence of the stage upon the social and political life at Athens. This course is intended to follow Course 9. Humphrey's "Clouds." Winter, 11:00.

14. **Euripides' Bacchae.** The development of the Greek drama and the poetical beauty and literary finish of this production are studied. Metrical system given special attention. Supplemental reading. "The Tragic Drama," by Haigh. Winter, 1902-3, 11:00.

15. **Demosthenes on the Crown.** Stress is laid on correct use of synonyms, Greek rhetoric and oratory. Frequent sight translations to catch the spirit of the orator. "Demosthenes on the Crown," by D'Ooge. Winter, 9:00.

16. **Aeschylus' Prometheus Bound.** History of the development of dramatic art among the Greeks. Study of the adaptation of epic and lyric forms to the purpose of the drama. Much attention is given to the metrical systems of the lyric passages. Allen's "Prometheus Bound of Aeschylus." Winter, 8:00.

17. **Lucian's Shorter Dialogues.** Those who have had two years or more of Greek are eligible to membership in this course. "The Dialogues of the Dead" and other short dialogues will be read. "Selections from Lucian," by Williams. Winter, 1902-3, 8:00.

18. **New Testament Greek.** John's Gospel and the Acts of the Apostles. In the translation, pure, idiomatic English of the nineteenth century is required. Westcott and Hort. Spring, 1902, 9:00.

19. **New Testament Greek.** Mark's Gospel, James and Galatians. Spring, 1903, 9:00; 8 M.

20. **Selected Odes of Pindar.** Much attention is given to mastering, not theoretically, but practically, the form. The poems are read rythmically over and over with the purpose of developing an appreciation of the lyrical perfection of these exquisite works of art. Seymour's "Odes of Pindar." Spring, 1902, 11:00.

21. **The Antigone of Sophocles.** A study of the Greek trilogy. Lectures on the Greek theatre. D'Ooge's "Antigone of Sophocles." Spring, 1903, 11:00.

22. **"Myths and Legends."** A study of those Myths and Legends upon which a large number of ancient and modern classics are based and to which frequent reference is made in English literature. No knowledge of Greek language necessary. Prerequisite for major credit, Greek 5. Guerber's "Myths of Greece and Rome." Spring, 8:00; 8 M.

23. **Seminary in Greek.** Papers and discussions on assigned topics. Larger opportunities for original investigation and specialization. Graduate students and those well advanced in their college course, who deside to become specialists in this department, should

take this course. Credit is given for one-third of a course each quarter, or more if the work accomplished justifies it.

Fall, Winter and Spring, Bi-weekly, Monday, 2-4 P. M., 8 M.
Professor Green and Mr. Ohern.

Latin Language and Literature.

Professor Douthat.

Students choosing Latin for their major must have at least nine courses and a thesis in this subject, and are expected to make Greek, German, French, or Mathematics as the minor for the six additional required courses. They are advised to elect courses in History, Philosophy, and at least one of the Sciences.

The seven divisions here presented are intended to be consecutive, but the courses in each division are not graded. Hence a student may enter upon any course of a division, provided he has had at least two courses of the division preceding or their equivalent. If, therefore, he cannot be present at the opening of the Fall or Winter Terms, there is nothing to hinder his entrance upon the courses offered for the Spring Term, and then at the beginning of the following year, he can take at least one of the courses of the preceding year, and still have time for two courses of the following year.

I Roman Anthology.

12. **Horace's Odes and Epodes,** with scanning.
Fall, 11:00; 21 U.

13. **Cicero's Amicitia and Senectute,** with study of synonyms.
Winter, 11:00; 21 U.

14. **Mediaeval Latin Hymns,** with scanning, or **Horace's Epistles.**

Latin composition the last two weeks of each term.

II. Roman Philosophy.

15. **Cicero's De Officiis or De Finibus, with study of synonyms.**
Fall, 9:00; 21 U.

16. **Seneca's Moral Essays,** with a study of his times.
Winter, 9:00; 21 U.

17. **Lucretius' De Rerum Natura,** with a study of his doctrines.
Spring, 9:00; 21 U.

Latin composition the last two weeks of each term.

III. Roman History.

18. **Livy, Books XXI or XXII,** with study of Roman History.
Fall, 10:00; 21 U.

19. **Cicero's Letters,** with a study of the great orator's times.
Winter, 10:00; 21 U.

20. **Tacitus: Germania and Agricola**, or his **Historiae** or **Annales**, with a study of the early Empire. Spring, 10:00; 21 U.

Latin composition the last two weeks of each term.

IV. Roman Drama.

21. **Plautus: Captivi, Trinummus, and Rudens**, with a study of the Roman Stage. Fall, 8:00; 21 U.

22. **Terence: Adelphoe, Phormio, and Heauton Timoreumenos**, with study of Greek and Roman Drama. Winter, 8:00; 21 U.

23. **Seneca: Medea, Hercules Furens, and Oedipus**, with study of Tragedy in Translation from Greek in Latin. Spring, 8:00; 21 U.

Latin composition the last two weeks of each term.

V. Roman Satire.

24. **Horace's Satires**, with a study of his times. Fall, 2:00; 21 U.

25. **Juvenal's Satires**, with a study of contemporaneous history. Winter, 2:00; 21 U.

26. **Seneca's Apokolokuntosis, and Petronius' Cena Trimalchionis**, with a study of Nero's times. Spring, 2:00; 21 U.

Readings, Papers, and Lectures, will take the place of Composition in this division.

VI. Latin Literature in English Translations.

27. **Study of Translations from Virgil and Horace**, with preparation of papers and supplemented with lectures. Fall, 3:00; 21 U.

28. **Study of Translations from Plautus and Terence**, with papers and lectures. Winter, 3:00; 21 U.

29. **Study of Translations from the Satirists**, with papers and lectures. Spring, 3:00; 21 U.

VII. Comparative Philology as Introduction to Romance Languages.

30. Lectures, notes, reading and papers on the differences of the Languages of the world, so far as those Languages are known. Fall, 4:00; 21 U.

31. Lectures, notes, reading, and papers on the similarities and differences of the different branches of the Aryan tongues. Winter, 4:00; 21 U.

32. Lectures, notes, readings and papers on the similarities and differences of the Latin and Romance Languages. Winter, 4:00; 21 U.

Hereafter all examinations for advanced standing will include Latin Composition.

Romance Languages and Literatures.

Associate Professor Chollet and Miss Carter.

Students making their major in French must have nine courses and a thesis in that language, and must make their minor in Latin. They are advised to study also English, German or Greek, and one Science, preferably Chemistry.

French.

1. **Elementary Course.** Grammar, reading and practice in pronunciation and oral understanding. Chardenal's Complete French Course; Bocher's Otto's French Reader.

Fall, first section, 8:00; 11 U; second section, 10:00; 11 U.

2. **Elementary Course.** A continuation of Course 1.

Winter, first section, 8:00; second section, 10:00; 11 U.

3. **Modern Prose.** A continuation of Course 2. Reading from works by Erkmann-Chatrian, Dumas, Daudet, George Sand, etc. Chardenal's Advanced French Exercises.

It is expected that in Courses 1, 2 and 3, the elements of French Grammar will be mastered, and a fair pronunciation and oral intelligence acquired.

Spring, first section, 8:00, 11 U; second section, 10,00, 11 U.

4. **Fiction of the Nineteenth Century.** Works by Daudet, Dumas, About, etc.; La Fontaine's Fables. Grandgent's Composition. Oral and auricular practice, continued through Courses 5 and 6. For students who have had one year of French.

Fall, 10:00; 11 U.

5. **Historical and Dramatic Works of the Nineteenth Century.** Michelet, Labiche, Dumas, Scribe, Augies, Banville.

Winter, 10:00; 11 U.

6. **Drama of the Seventeenth Century.** Corneille, Racine, Molière. Spring, 10:00; 11 U.

Note.—Courses 4, 5 and 6 are continuous, and it is recommended that they be taken in this order.

7. **French Tragedy.** (Advanced Course.) The works of Corneille and Racine, with one drama of Victo Hugo; outside reading; lectures on the drama from the Middle Ages to the death of Racine.

Fall, 11:00; 11 U.

8. **French Comedy.** (Advanced Course), with special study of the life and works of Moliere. Winter, 11:00; 11 U.

9. **L'Esprit Francais Du Jour.** French Conversation, based on two French daily newspapers representing opposing factions of French society of to-day. Spring, 11:00; 11 U.

10. **La Presse en France.** Extension of Course 9.

Spring, 11:00; 11 U.

11. **La Tribune en France.** Extension of Courses 9 and 10. Spring, 11:00; 11 U.

Note.—Courses 9, 10 and 11 will be given in rotation, one each year, and are open to all students who have completed eight courses in French. Students intending to take one of these three courses must notify the instructor at least one month before the opening of the course, and pay for their subscription to a French daily.

12. **French Literature of the Nineteenth Century,** from the Romanticist movement to the present. Fiction, Lyric Poetry, Drama, Criticism. Fall, 11:00; 11 U.

13. **French Literary Criticism.** Sainte Beuve, Taine, Brunetiere, Lemaitre, Gaston Paris, etc. Winter, 11:00; 11 U.

14. **Victor Hugo,** his life and works, and his place in modern literature. Fall, 11:00; 11 U.

15. **French Literature of the Seventeenth and Eighteenth Century.** In this course comparatively little attention will be devoted to the drama, which is studied in Courses 6, 7 and 8. Winter, 11:00; 11 U.

16. **French Literature of the Sixteenth Century.** Marot, Rabelais, Montaigne, Le Pleiade. Fall.

Note.—Courses 7, 8, 12, 13, 14, 15 and 16 are essentially courses in literature. They will be conducted partly in French, and students will have frequent opportunity to speak and write the language. In each course, as many texts as time permits will be read in class; others will be read outside and discussed in class. Part of the work will consist of special reports on assigned subjects.

17. **Old French.** The development of the language from Latin; phonology and grammar. La Chanson de Roland, Aucassin et Nicolette. Winter.

18. **Old French.** A continuation of Course 17. Reading of texts; lectures on mediaeval literature and on history of the language. Spring.

19. **French Dialects.** A study of the phonology and inflexions of the various French dialects, together with their geographical distribution. Winter.

20. **Research Work in French Literature** will be arranged for advanced students, including work on subjects suitable for theses.

Italian.

1. **Elementary Course.** Grammar, reading, and composition. It is desirable that students who take this course should have some knowledge of Latin. Fall.

2. **Elementary Course.** A continuation of Course 1. Winter.

3. **Elementary Course.** A continuation of Course 2. Spring.

4. **Italian Literature of the Middle Ages and Renaissance.** Two lectures or conferences each week, with a large amount of outside reading and preparation of reports on assigned subjects. Special attention will be paid to the influence of France on early Italian literature, to the life and works of Dante, and to the transition from the Middle Ages to the Renaissance. A reading knowledge of French or Italian will be of advantage, but not absolutely necessary. Winter.

Spanish.

1. **Elementary Course.** Grammar and reading, with practice in pronunciation, conversation, and composition. A knowledge of Latin or French will be of advantage to the students who take this course. Loiseaux' Spanish Grammar and Reader. Fall, 9:00.

2. **Elementary Course.** A continuation of Course 1; reading, conversation and composition. C. Fontaine's Doce Cuentos Escogidos; selections from Valera, Rueda, Pardo-Bazan, and other modern authors. Winter, 9:00.

3. **Intermediate Spanish.** A continuation of Course 2. Review of the grammar; study of idiomic constructions; conversation; reading of works by Tamayo y Baus, Alarcon, Breton de los Herreros, Perez-Galdos, etc. Spring, 9:00.

4. **Modern Spanish Literature.** Careful study of works by modern Spanish and Spanish-American writers, such as Nuñez de Arce, Perez-Galdos, Campoamor, Heredia, Selgas, etc. For students who have had one year of Spanish. Fall.

5. **Spanish Literature of the Renaissance.** Cervantes' Don Quijote de la Mancha; dramatic works of Calderon de la Barca, Lope de Vega, and other writers of the "Siglo de Oro." Winter.

6. **Old Spanish Literature** (for qualified students). El Cid, and other early works. Spring.

Germanic Languages and Literatures.

Professor Truscott and Mr. Porterfield.

Note.—The text-books named in the following courses may be changed at any time, but the grade and character of the work outlined in each course will remain the same.

German.

1. **Elementary German.** A course for beginners, the object being to acquaint the student with the elements of the grammar, to give him a reading knowledge of the easiest German prose, and as much practice as possible in pronunication. Thomas' "Grammar," Part I; Super's "Elementary German Reader," Part I.

Fall, first section, 9:00; second section, 10:00; 19 U.

2. **Elementary German.** A continuation of Course 1. Reading of easy prose and poetry. Several poems will be memorized and special attention given to correct pronunciation. Super's "Elementary Reader," Parts II, III, IV; Leander's "Traumereien." Bernhardt's German Composition.

Winter, first section, 9:00; second section, 10:00; 19 U.

3. **Elementary German.** A continuation of Course 2. Reading, dictation and conversation. Elementary work in composition, accompanied by a review of the main points of the grammar and a special study of the irregular verbs. "Immensee;" "Höher als die Kirche;" "L'Arrabbiata" (Lentz' edition); Hatfield's "Materials for Composition."

Fall, 11:00; Spring, first section, 9:00; second section, 10:00; 19 U.

4. **German Prose.** Rapid reading of a large amount of prose by modern authors to render the student familiar with the idioms of the language and give a large and varied vocabulary. Nichol's "Three German Tales;" Wildenbruch's "Stille Wasser;" Keller's "Kleider machen Leute." Fall, 8:00; 19 U.

5. **Composition and Conversation.** Practice in writing German and translation of English prose into German. Discussion of grammatical points in connection with the translation. Study of the irregular verbs. Dictation. A part of the time will be devoted to conversational exercises. Reading at sight. Harris' "Prose Composition;" Watson's "German Sight Reading." Schrakamp's "Erzaehlugen aus der deutschen Geschichte." Winter, 8:00; 19 U.

6. **German Poetry.** Translation of two long poems. Reading and memorizing of a great number of short well-known poems. Von Klenze's "Deutsche Gedichte;" "Hermann und Dorothea" (Hatfield); "Trompeter von Saekkingen." (Frost). Spring, 8:00; 19 U.

7. **Survey of German Literature.** This course deals in outline with the history of the literature, its beginnings and development, and lays stress on the prominent authors and chief epochs. Assigned private reading in the various standard histories of the literature. Translation in class of pieces, representative of the different writers and periods. Keller's "Bilder aus der deutschen Litteratur."

Fall, 11:00; 22 U.

8. **Advanced Composition.** Dictation and conversation. Exercises in conversation will be based on Bronson's "Colloquial German;" Jagemann's "Prose Composition" and "Syntax."

Winter, 11:00; 22 U.

9. **Heine.** Study of his life. Reading from his prose and poetry. "Reisebilder;" "Die romantische Schule;" "Das Buch der Lieder." Spring, 11:00; 19 U.

10. **Lessing.** Study of his life. Reading of "Der junge Gelehrte;" "Die Juden;" "Miss Sara Sampson;" "Minna von Barnhelm;" "Emilia Galotti;" "Nathan der Weise." Weekly themes in German on assigned subjects. Fall, 9:00; 22 U.

11. **Goethe.** Study of his life. Reading of Goetz von Berlichingen;" "Werther's Leiden;" "Iphigenie auf Tauris;" "Egmont;" "Torquato Tasso." Weekly themes in German on subjects selected by the student.

12. **Schiller.** Study of his life. Reading of "Don Carlos;" "Marie Stuart;" "Die Jungfrau von Orleans;" "Die Brant von Messina;" "Wilhelm Tell." Long bi-weekly themes in German on assigned subjects. Spring, 9:00; 22 U.

13. **Heinrich von Kleist.** Readi of "Die Familie Schroffenstein;" "Der Zerbrochene Krug;" "Das Kaetchen von Heilbronn;" "Die Hermannsschlacht;" "Penthesilea," and "Prinz Friedrich von Homburg." Fall, 10:00; 22 U.

14. **Faust.** History of the legend, "Das erste Faustbuch;' Marlow's "Faustus:" "Faust" of Klinger, Mueller, Grabbe and Lenau. Goethe's "Faust I."

15. **Faust.** Continuation of German 14. Goethe's "Faust II."

16. **Scientific German.** Intended for students in the scientific courses who have had at least a year of elementary German. The purpose is to teach the students to read at sight scientific articles in German. Hodges' "German Science Reader;" Cohn's "Ueber Bakterien." Spring, 9:00; 22 U.

17. **Historical Prose.** A reading course of historical prose. Subjects taken from the history of Germany and its literature. For students who have had two years of German. Schoenfeld's "German Historical Prose;" Freytag's "Karl der Grosse;" Freytag's "Doktor Luther." Winter, 11:00; 19 U.

Anglo-Saxon.

1. **Anglo-Saxon.** Introductory course for students in English and German. An introduction to the historical study of the English language. Grammar and translation of Anglo-Saxon prose. Study of word forms with special reference to modern English. Prerequisites: English 1; Rhetoric 1 and 2· German 1, 2, 3.
Fall, 8:00; 22 U.

2. **Anglo-Saxon.** Translation of "Beowulf."
Winter, 8:00; 22 U.

3. **Anglo-Saxon.** Study of "Beowulf" concluded. Outline of the history of Anglo-Saxon literature and consideration of its principal monuments. Spring, 8:00; 22 U.

The English Language and Literature.

Professor Patterson, Associate Professor Barbe, and Mr. Smith.

[Note.—There are four sections in this department: (1) Rhetoric, (2) English Language, (3) English Literature, (4) Elocution. Students who elect English as their major study must choose a particular section and take at least six of their nine courses in that section. The courses in this department are open to all students who have completed the entrance requirements in English. Courses beyond Course 2 in Rhetoric and Elocution are open only to students whose grade in Rhetoric 2 or Elocution 2 is 80 per cent or over.]

The required minors for students making English Language and Literature their major are, for Sections 1 and 2, six courses in German; for Section 3, preferably six courses in German, but six courses in any language, in History, or Philosophy, may be offered; for Section 4, six courses in a Romance Language. Especially recommended for Sections 1, 2, and 3: All courses in English History; three courses in French, two courses in the Fine Arts; two courses in Philosophy, and three courses in one Science. Especially recommended for Section 4: All courses in English History, a second Romance Language, three courses in Fine Arts, two courses in Music, and six courses in English Literature.

Except in Section 4, all students must take English Language 1. Students in all sections must take Rhetoric 1 and 2.

Rhetoric.

1. **Composition.** The work is almost wholly practical. Daily themes; criticism in class. A number of book reviews and three long essays. In addition to the text-book work, a special study of several prose masterpieces. It is intended that the student shall gain a thorough practical knowledge of all matters of rule. Lectures. Consultations. Fall, 11:00; Spring, 8:00.

2. **Rhetoric.** In this course especial attention is given to matters of taste. The student is required to read and make written reports on a number of masterpieces. Long essays. Extempore composition and criticism. Class study of several literary masterpieces. Lectures. Consultations. Prerequisite, Rhetoric 1. Winter, 11:00.

3. **Exposition, Description and Narration.** Close study of literary masterpieces illustrating the various forms. Constant practice in applying principles. Criticism. Prerequisites, Rhetoric 1 and 2. Spring, 11:00.

4. See under Elocution 5.

5. **The Essay.** The essayists of the nineteenth century are

studied to illustrate the uses of the essay form and the growth of this element in our literature. Criticisms, with written reports on assigned topics, and writing of typical essays. Prerequisites, Rhetoric 1 and 2. Fall, 10:00.

6. **The Short Story and Novel.** Examples of the various forms are read and methods analyzed. The development of the Short Story during this century is noted. Practice in writing. Criticism. Consultations. Prerequisites, Rhetoric 1 and 2. Winter, 10:00.

7. **The Poem.** The History of Versification. Lectures. Investigation of assigned topics. Composition and Criticism. (Omitted in 1901-2.) Winter, 10:00.

8. **Style.** A study of style in nineteenth century English. Reference to Spencer, De Quincey and others. Constant writing of papers. Criticism. Consultations. Fall, 8:00.

9. **Prose in the Fifteenth, Sixteenth, and Seventeenth Centuries.** A study of the beginnings of style in English prose. Individual investigation of assigned topics. Reports. Lectures. Winter, 8:00.

10. **Style in the Eighteenth Century.** The development of an artistic sense in the writing of English prose. Study of the great masters of prose style in this century. Reports. Lectures. (Omitted in 1901-2.) Winter, 8:00.

11. **Themes.** An advanced course. Daily themes are required. The class will meet the instructor once or twice a week for discussion and criticism. Individual consultations. Prerequisites, Rhetoric 1 and 2. Spring, 10:00.

12. **Criticism.** The history and principles of literary criticism. (Omitted in 1901-2.) Fall, 8:00.

13. **Literary Expression.** A course of readings from the works of the greatest English authors from Chaucer to Addison, to arouse appreciation of literature. This course and Courses 14 and 15 will each be given credit as one-third of a course. Fall, Thursday, 7:00 P. M.

14. **Literary Expression.** A continuation of Rhetoric 13, Fielding to Thackeray. Winter, Thursday, 7:00 P. M.

15. **Literary Expression.** Irving to Kipling. Spring, Thursday, 7:00 P. M.

[Note.—Courses 1 to 4 inclusive are undergraduate courses; from 5 to 12, either undergraduate or graduate courses.]

English Language.

1. **Old English.** See Anglo-Saxon 1 in the Department of the Germanic Languages and Literatures. Fall, 8:00.

2. **Beowulf.** See in the Department of the Germanic Languages and Literatures. Winter, 8:00.

3. **The Saxon Period.** See in the Department of the Germanic Languages and Literatures.

4. **The Norman Period.** Selections will be read. Lectures. Prerequisite, Anglo-Saxon 1. Fall, 9:00.

5. **Chaucer.** Fall, 9:00.

6. **1350-1557.** Winter, 9:00.

7. **The Elizabethan Period.** (The dramas will be merely noted. The principal work will be upon the poets, romancers, and essayists.) Spring, 9:00.

8. **Spenser.** Winter, 8:00.

9. **Historical English Grammar.** (Omitted in 1901-2.) Spring, 8:00.

[Note.—The courses in English Language may be either undergraduate or graduate courses.]

English Literature.

Rhetoric 1 and 2 are prerequisites to the courses in this section. English Literature 1 is prerequisite to further courses in English Literature.

1. **General Survey of English Literature.** This course is intended to be an introduction to the study of literature. Its purpose is to give the student a conception of the nature of literature, a general knowledge of the great field of literature, and a definite knowledge of a few English classics. Prerequisites, Rhetoric 1 and 2. Fall, 8:00; Spring, 10:00.

2. **Seventeenth Century Literature.** Critical study of a few masterpieces of representative writers. Recitations and reports on assigned readings. Lectures. Prerequisites, Rhetoric 1 and 2, and English Literature 1. Fall, 11:00.

3. **Milton.** As thorough a study of his contribution to English Literature as is possible in one course. Spring, 11:00.

4. **The Classic Period.** Winter, 11:00.

5. **The Romantic School of Poetry.** Spring, 11:00.

6. **Victorian Poetry.** Fall, 10:00.

7. **The Rise of the English Drama.** From the beginnings to Shakespeare. Fall, 10:00.

8. **Shakespeare's Comedies.** The instructor will read the plays to the class. Assigned topics and written reports. (Omitted in 1901-2). Winter, 9:00.

9. **Shakespeare's Tragedies.** Conducted as course 8. Winter, 9:00.

10. **Shakespeare's Histories.** Conducted as course 8. (Omitted in 1901-2). Winter, 9:00.

11. **Shakespeare.** An attempt to measure the man and his

work. Class reading of a few representative plays. Reports. Lectures. Spring, 9:00.

12. **Shakespeare to Shirley.** The dramatic tendencies of this period. Winter, 10:00.

13. **Shirley to Sheridan.** (Omitted in 1901-2.) Winter, 10:00.

14. **English Literature in America.** Spring, 10:00.

[Note.—Courses 1, 8, 9, 10, are undergraduate courses. The remaining courses are either graduate or undergraduate.]

Elocution.

[Note.—The necessity of English Literature in connection with the work in Elocution cannot be too often impressed. The professor of Elocution will recommend no student as a teacher of Elocution or as a public reader unless he has had, in addition to his courses in Elocution as his major, at least six courses in English Literature.]

1. **Elocution.** A preliminary course in the essentials of expression to remove faults and mannerisms and to establish correct use, freedom, and ease; to give the student control of the instruments of expression. Section drill, rehearsals, and recitals. Fall, Winter, 12:00.

2. **Voice and Vocal Expression.** A thorough training in voice. The student will prepare a very few selections, almost all his time in and out of the class being given to rendering the voice an efficient instrument of expression. Individual training. This course will be credited as two-thirds of a course. Winter, 12:00.

3. **Expression.** A continuation of Course 1. Especial attention to the technique of the speaker's art. Individual and section drill. Assigned literature for analysis and interpretation. Prerequisite, Elocution 1. Spring, 12:00.

[Note.—Further courses in Elocution should not be undertaken without at least three courses previously in English Literature.]

4. **Expression in Drama.** Study of a Shakespearean play. Analysis and interpretation of character and scene. Problems of the stage. Stage management, etc. Lectures. Fall, 11:00.

5. **Oration and Argumentation.** Study of great orations. Lectures on extemporaneous speaking, structure and diction of spoken discourse, etc. Constant practice in extemporaneous speaking and debate. Preparation of briefs and of one oration. Fall, 2:00.

6. **Oratory.** Preparation and delivery of orations. Study of models; briefs, etc. Daily practice in speaking. Prerequisites, Elocution 1 and 5. Winter, 2:00.

7. **Extemporaneous Speaking and Debate.** Daily practice. Lectures. Prerequisite, Elocution 1. (Omitted in 1901-2). Winter, 2:00.

8. **Expression and Criticism.** Each student will appear before the class once a week. Class criticism and discussion. Two original selections will be required. Prerequisites, Elocution 1 and 2, and Rhetoric 1. Winter, 9:00.

[The number of days each week will depend upon the number of students in the class.]

9. **Public Reading.** Individual training with a view to platform work. Methods of analysis and interpretation. The work of the student throughout this course is centered upon four selections. Prerequisites, Elocution 1 and 2. (Omitted in 1901-2.)

Spring, 12:00.

10. **Recitals.** Preparation of a program, and the giving of a public recital. Individual training. Open to students who have had six courses in Elocution. Spring, 12:00.

11. **Interpretation.** Any student sufficiently advanced may pursue the analysis and interpretation of a complete play or other long masterpriece, or a number of works by some author under the direction of the Professor of Elocution.

[Note.—The courses in Elocution are undergraduate courses.]

[Note.—Any competent graduate may pursue the investigation of a restricted field of study in English, under the direction of the head of the department.]

Mathematics.

Professor Stewart.

Students who select Mathematics for their major are advised to make their minor in one of the Modern Languages.

1. **University Algebra.** Theorem of Undetermined Coefficients, Summation of Series, Theory and Practice of Logarithms, Logarithmic and Exponental Series. Theory of Equations. Wells' "University Algebra." Fall, 10:00; Spring, 9:00.

2. **Solid Geometry.** Geometry of the Prism, Pyramid, Cylinder, Cone and Sphere, Practical Exercises. Well's "Solid Geometry."

Fall, 9:00; Winter, 10:00.

3. **Plane Trigonometry.** Development of Formulae, practical problems. Wells' "Revised Trigonometry."

Winter, 9:00; Spring, 10:00.

4. **Trigonometry.** Solution of Trigonometrical Equations. Construction of Trigonometric Tables. Proportional Parts. De Moivre's Theorem. Gregory's, Euler's and Machin's Series. Summation of Trigonometric Series. Bowser's "Treatise on Trigonometry. Spring, 2:00.

5. **Spherical Trigonometry.** Development of Formulae. Applications to Surveying, Navigation, and Astronomy. Bowser's "Treatise on Trigonometry." Winter, 11:00.

6. **Plane Analytic Geometry.** Cartesian and Polar Co-ordinates. Properties of Conics: Circle, Ellipse, Parabola, and Hyperbola. Nichol's "Analytic Geometry." Fall, 8:00.

7. **Analytic Geometry.** Higher Plane Curves. General Equation of the Second Degree. Geometry of Three Dimensions, Ellipsoids, Paraboloids, Hyperbolic-Paraboloids. Nichol's "Analytic Geometry." Spring, 11:00.

8. **Theory of Equations.** Solution of Higher Equations, Cardon's Method for Cubic Equations, Sturm's Theorem, Horner's and Newton's Methods of Approximation, Fourier's Theorem. Macknie's "Algebraical Equations." Fall, 11:00.

9. **Determinants.** Various Properties of Determinants. Laplace's and Cauchy's Method of Development. Differentiation of Determinants. Peck's "Determinants." Fall, 3:00.

10. **Differential Calculus.** Differentiation of Algebraic and Transcendental Functions. Taylor's and Maclaurin's Formula, Evaluation of Indeterminate Forms. Maxima and Minima, Tangents and Normals, Asympotes. Involutes and Evolutes, Curvature, Curve Tracing. Nichol's "Differential Calculus." Winter, 8:00.

11. **Integral Calculus.** Integration of Algebraic and Transcendental Functions. Areas between Limits. Surfaces and Solids of Revolution. Double and Triple Integration. Center of Mass. Moment of Inertia. Nichol's "Integral Calculus." Spring, 8:00.

Astronomy.

Professor Stewart.

1. **Descriptive Astronomy.** Young's "General Astronomy." Winter, 3:00.

2. **Descriptive Astronomy.** Continuation of Course 1. Young's "General Astronomy." Spring, 3:00.

Physics.

Professor Hodges and Mr. Conley.

Students who elect Physics as major may combine with it work in Applied Mathematics, approved by the head of the department. The required minor work will be six courses in Pure Mathematics. Chemistry, Modern Languages, and English will be required. The professor in charge of the department will advise students in the choice of supplementary courses.

1. **Elementary Physics.** Recitations, supplemented by experiments and laboratory exercises. One hour per week at least will be devoted to individual laboratory work. Thwing's Elementary Physics. Prerequisite, Plane Geometry 1. Fall, 9:00; 11 S.
Laboratory hours to be arranged.

2. **Elementary Physics.** Continuation of Course 1.

Winter, 9:00; 11 S.

Courses 1 and 2 will satisfy the entrance requirements in Physics. Students in the College who have presented not more than one course in Physics among the entrance requirements may receive college credit for these courses, if both are taken.

Engineering students in the Preparatory School, who have been credited with one course of Physics taken elsewhere, may take the remainder of their required preparatory work in Physics in the laboratory.

4. **Experimental Physics.** A laboratory course exclusively, consisting of elementary quantitative experiments. Open to students who do not take Course 6. Sabine's "Laboratory Course in Physics." Prerequisites, Physics 1 and 2, or equivalent work, and Plane Trigonometry.

May be taken in the Fall, Winter and Spring quarters, one-third course each quarter. Mondays, Wednesdays, 1:30; 1 S.

6. **General Physics.** Mechanics. Lectures and recitations, accompanied by individual laboratory work, which, though elementary, is strictly quantitative. Required of candidates for Engineering degrees. Ames' "Theory of Physics." Prerequisite, Plane Trigonometry.

Fall. Lectures: Monday, Wednesday, Friday, 10:00; 11 S.
Laboratory: Tuesday, Thursday, 10:00 and 1:30; 1 S.

7. **General Physics.** A continuation of Course 6. Heat, Electricity, Magnetism. Lectures and Laboratory work.

Winter. Lectures: Monday, Wednesday, Friday, 10:00; 11 S.
Laboratory: Tuesday, Thursday, 10:00 and 1:30; 1 S.

8. **General Physics.** A continuation of Course 7. Sound and Light. Lectures and Laboratory work.

Students who have not taken Course 7 may be admitted to this course, if they have taken Course 6.

Spring. Lectures: Monday, Wednesday, Friday, 10:00; 11 S.
Laboratory: Tuesday, Thursday, 10:00 and 1:30; 1 S.

10. **Sound.** Advanced theoretical work. Lectures and laboratory exercises. Prerequisites, Physics 8, Mathematics 9.

Half course, first six weks, Fall 11; 11 S.

11. **Light.** Lectures and laboratory measurements. Prerequisite, Physics 8, Mathematics 9.

Half course, second six weks, Fall, 11:00; 11 S.

12. **Electrical Measurements.** Advanced laboratory work. The student uses measuring instruments of precision, sensitive galvanometers, apparatus for accurate measurement of resistance, current, electromotive force, induction, magnetic properties of iron, etc.

Carhart and Patterson's "Electrical Measurements." Prerequisite, Physics 7, Mathematics 11.

One-third course. Hours to be arranged.

17. **Dynamos and Motors.** The elements of the general theory of dynamos and motors. Lectures and laboratory work. Prerequisite, Physics 7. Course 12 in part may be substituted for the laboratory work of this course. Sheldon's "Dynamo-Electric Machinery."

Spring, 9:00; 11 S.

20. **Special Work.** Students desiring to pursue any line of special work in the department of Physics will be given opportunity to do so to the extent the time of the instructors and the laboratory equipment will permit. Credit for such work will be allowed in proportion to the work done.

Chemistry.

Professor Whitehill and Assistant Professor Kortright.

Students making their major in Chemistry are required to have at least nine courses and a thesis in this subject; they may make their minor in Agriculture, Medicine, Eingineering, Zoölogy, Botany, English, Physics, or Geology. They are advised also to take courses in Mathematics, German, and French.

1. **Inorganic Chemistry.** This course is designed for beginners, and serves as a general introduction to chemical methods and operations. It includes a systematic study of the laws of chemical combinations, the source, preparation, properties and compounds of the non-metallic elements and the principles and theories of chemical philosophy. Experimental lectures, laboratory work, and recitations. Fall, first section, 9:00; second section, 11:00;

Spring, 10:00; 20 S.

2. **Inorganic Chemistry.** This course includes the study of the metallic elements, and special attention is paid to the application of Chemistry in Agriculture, Engineering, Medicine, and every-day life.

Winter, first section, 9:00; second section, 11:00; Fall, 10:00; 20 S.

3. **Organic Chemistry.** This course includes the study of the more important organic compounds, together with the laboratory processes for the preparation of such compounds. Lectures, laboratory work, and recitations.

Spring, first section, 9:00; second section, 11:00; 20 S.

4. **Qualitative Analysis.** A laboratory course treating of the separation and detection of the common elements. In this course the students are expected to be able to write the reactions accruing in their work and their ability to do so is tested from time to time.

One-third course, Fall, Tuesdays and Thursdays, 1:30; 22 S.

5. **Elementary Quantitative Analysis.** This course includes a small number of simple gravimetric, volumetric, and electrolytic

determinations, together with the study of the operations involved. Laboratory course.

One-third course, Winter, Tuesdays, Thursdays, 1:30; 22 S.

6. **Analysis of Coal, Coke and Water.** This course is designed especially for Enginering students, but is open to others who have the necessary preliminary training. Laboratory course. One-third course. Spring, Tuesdays and Thursdays, 1:30; 21, 22 S.

7. **Toxicology.** Especially designed for medical students. The course will include a study of inorganic and organic poisons, their physiological effects and antidotes. Laboratory course.

Spring, Tuesdays and Thursdays, 1:30; 21, 22 S.

8. **Water and Food Analysis.** Analytical Chemistry as applied to domestic science. This course is in part identical with Course 7, but includes analysis of water and of foods.

Spring, Tuesdays and Thursdays, 1:30; 21, 22 S.

9. **Quantitative Analysis.** This course is designed for students who expect to make Chemistry a specialty. It includes exercises in determining the composition of ores, minerals, and various technical compounds. Instruction is also given in assaying, gas analysis, and in the analysis of iron and steel. Exercises are selected to give as wide an acquaintance as possible with laboratory methods.

Fall, Winter, Spring, 1:30; 21, 22 S.

10. **Iron Ores, Pig Iron, and Steel.** This course includes practice in the special methods of analysis of ores, pig iron and steel in use in the laboratories of the iron and steel works located in West Virginia and Western Pennsylvania.

Fall, Winter, Spring, 1:30; 21 S.

11. **Medical Organic Chemistry.** This is a lecture and laboratory course in such special subjects of Organic Chemistry as carbohydrates, fats, proteins, and foods in general, together with certain organic amido and other nitrogenous compounds.

Fall, 10:00 to 12:00; 21 S.

12. **Medical Analysis.** This course includes a study and practice of all the essential analytical methods as used in modern practice of medicine. Winter, 10:00 to 12:00; 21 S.

13. **Physical Chemistry.** Lectures and recitations giving non-mathematical exposition of the fundamental principles of chemical theory as developed during recent years. Spring, 11:00; 22 S.

14, 15, 16. **Organic Chemistry.** These courses are open to students of Pharmacy only. The courses are largely laboratory courses with E. Fischer's "Organische Praparate" as laboratory manual and with Gattermann's "Methods of Organic Chemistry" and Lassar-Cohn's "Methods of Organic Chemistry" for reference. In addition to six hours' laboratory work a week, two lectures or recitations will be required. Richter's "Organische Chemie" (last German edition)

will be used as a basis for these. The students will also be required to write abstracts and discussions of some of the best current articles on the subject so as to familiarize themselves with the current chemical periodicals. Fall, Winter, Spring;

Tuesdays, Wednesday and Thursdays, 10:00-12:00; 22 U.

Lecture and recitation hours to be arranged.

20. **Research Work.** Chemistry offers a wide field for investigation. Special work in any of the various departments of the science may be taken in the laboratory under the direction of the instructors, and credit will be given in proportion to the amount of work accomplished. 21, 22 S.

For courses in Agricultural Chemistry, see announcements of the College of Agriculture.

Geology and Mineralogy.

Professor Brown.

1. **Physical Geography.** An elementary course for which no credit is given toward a college degree, but which must be taken before students are admitted to other courses in this department, unless they have had its equivalent elsewhere. Fall, 10:00; 30 S.

2. **Geographic Geology.** The crust of the earth; river valleys; plateaus and mountains; man and nature; the economic products of the earth; meteorological instruments and methods. Open to any University student. Davis' "Physical Geography."

Winter, 10:00; 30 S.

3. **General Geology.** A general course in dynamic and structural Geology. Economic applications of Geology will receive special attention. Numerous excursions will be made. The University is situated in a mining region, and within five miles of the western fold of the Appalachian mountains; the advantages for the practical study of Geology are therefore almost unequaled. Recitations, lectures and field work. LeConte's "Elements of Geology." Prerequisites, Chemistry 1, Physics 2. Fall, 11:00; Spring, 9:00; 30 S.

4. **Paleontology.** The progress and development of plants and animals through the different ages of the earth. For illustration in this subject the University has an equipment of many thousands of fossils, casts and models. Recitations and lectures. LeConte's "Elements of Geology." Prerequisites, Zoölogy 1 and Botany 2.

Winter, 11:00; 30 S.

5. **Economic Geology.** Common rock and vein-forming minerals; Physical Geography and Geology of the United States; the origin of ore deposits; mining terms and methods; metalliferous deposits. Recitations and lectures. Tarr's "Elements of Economic Geology." Prerequisite, Geology 3. Spring, 11:00; 30 S.

6. **Advanced Economic Geology.** The fuels—coal, oil and nat-

ural gas—soils, clays and fertilizers, precious stones and building stones. The University is in the midst of a great coal-producing region, while oil and gas wells are within easy reach. Recitations and lectures. Tarr's "Elements," and Merrill's "Stones for Building and Decoration." Prerequisite, Geology 5. Fall, 10:00; 30 S.

7. **Mineralogy.** Crystallography; physical qualities of minerals; description of minerals consisting of basic elements to the silicates. The University has a good collection of minerals for practical instruction. Open to all University students. Recitations, lectures and practical determinations. Dana's "Manual of Mineralogy." Fall, 8:00; 30 S.

8. **Advanced Mineralogy.** The silicates and hydrocarbon compounds and their determination. Dana's "Manual of Mineralogy." Winter, 8:00; 30 S.

Zoology.

Professor J. B. Johnston and Mr. Parke.

Students having their major in Zoölogy will take Courses 2-10 and 20 (thesis). They must present in addition three courses in Botany, or Chemistry, or Physics, and are strongly advised to do further work in Botany and Chemistry.

Students who wish a general knowledge of Zoölogy should take Courses 1, 2, 3, 4, and 5. Courses 1 to 6 or 3 to 8 inclusive meet the requirement for students of entomology. Prospective medical students may begin with Course 6, but must expect to give more time and effort to the work than those who have had the preceding courses.

In all courses the time of laboratory work and lectures is to be arranged with the instructor. At the time of enrolling, students must give the instructor a statement of the hours taken by other classes.

1. **Animal Life.** A study in the field and laboratory of the number, variety, distribution, food, habits, and conditions of life of animals, and their reproduction, development and life cycle. The students will work out for themselves by observation and mutual discussion, under the direction of the instructor, the facts and laws of struggle, survival, adaptation, protective resemblance, symbiosis, community life, parasitism, habit, and intelligence. Spring.

Open to preparatory students only.

2. **The Evolution of Species.** Illustrated lectures, with reading and recitations, on the course, methods and laws of evolution. Open to those who have had Course 1 or 5, and to advanced students without preceding work in Zoölogy. Winter.

3, 4, and 5. **General Zoölogy.** The aim is to acquaint the student with the chief types of animal structure and to give him a

general survey on which to base the study of development and evolution. Fall, Winter, and Spring.

6. **The Cell.** A study of the structure and functions of the cell, cell-division, reproduction in the Protozoa, and the general features of cell differentiation. Elementary instruction in microscopic technique. Fall.

7 and 8. **Vertebrate Embryology.** Laboratory work on the maturation, fertilization, and cleavage of the ovum, and on the development of the salamander and of the chick; lectures on the comparative embryology of vertebrates.

Prerequisite, Course 6. Winter, Spring.

9 and 10. **Comparative Anatomy of Vertebrates.** Laboratory study of types of vertebrates, with lectures on their comparative anatomy, with especial reference to the factors in the progressive modification of organs. This course is intended to give the medical student a broad foundation for the study of human anatomy, and to prepare the special student in zoölogy for advanced studies in the line of vertebrate morphology.

Prerequisite, Course 8. Fall, Winter.

11, 12, and 13. **Comparative Neurology.** These courses include a general study of the nerve elements and of the nervous systems of invertebrates, the comparative study of the minute anatomy of the central system of vertebrates, and the morphology of the cranial nerves. The student will receive instruction in modern methods of neurological investigation and prepare his own slides. The lectures will deal with the minute structure of the vertebrate brain, including that of man, the terminal organs and their influence on brain structure.

Prerequisite, Course 10 and a working knowledge of French and German. Fall, Winter, Spring.

19. **Current Literature.** The advanced students and instructors form a Journal Club which meets weekly for reports and discussion of recent literature. One course credit for the year.

20. **Research Work.** Properly qualified students may undertake research upon the anatomy or development of vertebrates or invertebrates.

Prerequisite, Course 10 and ability to read scientific German.

Botany.

Professor Copeland.

Students whose major study is Botany must have credit for Botany 3-11 and 20 (Thesis). The prerequisites for Botany 9 are (beside Botany 8):

Chemistry and Physics, 4 courses; Zoölogy 1, 2, 3; ability to read scientific German.

Other work that is very desirable for Botany students would include: More Chemistry; Latin—full preparatory credit (17 books and composition); French, three courses; Horticulture 4 and 5; Geology 4.

1. **Elementary Laboratory Botany.** This is a laboratory course, with dissecting and compound microscopes and including some simple experiments. A text-book will be used only as a general guide. Fall, Winter, 2:00; 30 U.

2. **Elementary Field Botany.** This is largely out-door work, and will include practice in the determination of vascular plants, with Gray's Manual. Spring, 2:00; 30 U.

Either of these courses may precede the other, but they should be taken in successive quarters. College credit will not be given for them. A single admission credit will not be accepted in Botany. Candidates for admission to the University who have completed the equivalent of one of these courses may take the other three here and be credited with both.

After June, 1901, lectures and laboratory work in College Botany will be independent of each other. In Courses 3-11 and 20 (the work of the majors in Botany) the work will be entirely individual. A student may enter any of these courses for which he is prepared at the opening of the quarter, except that three cannot be given in the winter. The number of the course taken will indicate the time the student has been studying Botany. The names of the courses are only approximate, and the work assigned to any student during any quarter will be adapted somewhat to his individual needs. In general, the first year's work will be morphological and taxonomic; that of the second year, anatomical; and of the third year, physiological. A course consists of ten hours laboratory work weekly, with reading.

3. **The Algae.** The Algae are the simplest typical plants, and the ancestors of the higher plants, and furnish the best material for introductory study of the plant cell.

Open to all college students. 30 U.

4. **Fungi and Bryophytes.** Continuation of Course 3. 30 U.

5. **Vascular Plants.** In their third quarter in Botany, pre-medical students will be given an opportunity to become familiar as far as possible with medical plants, while other students will study the relationship rather than any economic properties of the seed plants. 30 U.

6. **The Epidermal Tissues.** A study of the structure and functions of the tissues of this system, with an introduction to histological methods. 30 U.

7. **The Fundamental and Fibro-Vascular Systems.** A continuation of Course 6. 30 U.

8. **Cytology.** A study of the protoplasm and its parts, with exercises in the technique of hardening, staining, etc. 30 U.

9. **Physical Physiology.** This course consists entirely of experiments. Students must be ready to work at extra or unusual hours if the experiments demand it. A working acquaintance with Chemistry, Physics, Zoölogy, and German, is necessary for satisfactory practical work in vegetable physiology.

10. **Chemical Physiology.** 30 U.

11. **Growth and Irritability.** The work of Courses 9, 10, and 11, is continuous. 30 U.

12. **General Botany.** Lectures with demonstrations twice weekly during the winter and spring quarters, the whole to count as one course. Open to all college students. Tu., Thurs., 2:00; 30 U.

13. **Anatomy and Physiology.** Lectures with demonstrations daily. Open to all college students. Fall, 2:00; 30 U.

20. **Research.** Students prepared to do original work in physiology or histology will be given such laboratory facilities as their work demands, and credit will be given in proportion to the amount of work accomplished.

Anatomy and Physiology.

Professor ————.

1. **Anatomy.** This course will consist of a thorough study of the skeleton and of the single bones through one quarter, an adequate supply enabling the students to study the actual bones as well as the text-book. Daily recitations and demonstrations. Prerequisites, French 6, German 6, Physics 2, and Zoölogy 11. Fall, 9:00.

2. **Anatomy.** The articulations and the muscles will be studied by text, demonstrations and dissection. Prerequisite, Anatomy 1. Winter, 9:00.

3. **Anatomy.** The circulatory system and some of the viscera are studied during the third quarter of the year. Dissection is carried on through the second and third quarters until one lateral half of the body has been studied and demonstrated by the student to the satisfaction of the instructor. Prerequisite, Anatomy 2. Winter, 10:00.

6. **Anatomy.** Surgical and regional anatomy, surface landmarks, etc., will be taught for half the quarter. In this work the living model will be used as much as possible. Embryology (human) will occupy the second half. Prerequisite, Anatomy 5. Spring, 10:00.

Physiology.

1. **Physiology.** The subject is begun in the second quarter of the year, after the student has had one quarter in Anatomy

and the same in Histology. The physiology of the cells, the tissues and the blood is taught by recitations, lectures and laboratory methods. Prerequisites, Anatomy 1, Histology 1. Winter, 11:00.

2. **Physiology.** The heart and blood vessels, blood pressure, vasomotor phenomena, and pulmonary and tissue respiration are taught as above. Prerequisite, Physiology 1. Spring, 11:00.

3. **Physiology.** The first quarter of the year is devoted to the study of digestion, absorption and excretion. Prerequisite, Physiology 2. Fall, 9:00.

4. **Physiology.** The subjects treated in this quarter are tissue, metabolism, the locomotor mechanism and the special senses. Prerequisite, Physiology 3. Winter, 9:00.

5. **Physiology.** The functions of the nervous system and the physiology of reproduction complete the course. It will be noticed that the work in Anatomy and Physiology makes each the supplement of the other, so that the student acquires a knowledge of function while engaged upon the study of structure. Prerequisite, Physiology 4. Spring, 9:00.

Histology, Pathology, Bacteriology and Materia Medica.

Professor Magill.

Histology.

1. **Histology.** This course teaches the student the varieties of animal and human cells and tissues in the normal condition, and also the various methods employed in their study. Each student is expected to make a collection of 150 to 200 slides for future use. Prerequisites, French 6, German 9, Zoölogy 11. Laboratory. Fall, 10:00; 1 U.

2. **Histology.** Students who have displayed interest and ability may carry on more advanced work in the normal tissues. Laboratory. Prerequisite, Histology 1. Hours to be arranged.

Pathology.

1. **Pathology.** A lecture course in General Pathology with demonstrations where practicable. As much as possible of the field of Comparative Pathology is covered, although the course is designed strictly for prospective physicians, and human diseases are the chief object of study. Prerequisite, Histology 1. Winter, 10:00; 1 U.

2. **Pathology.** Ample material has been provided to give a complete laboratory course in morbid human tissues. The student makes a collection of 150 slides and studies them. Prerequisites, Histology 1, Pathology 1. Spring, 10:00; 1 U.

3. **Pathology.** A special course in Experimental Pathology will

be given to advanced students in limited numbers. This may be taken as an elective course in preparation for a thesis. Prerequisite, Pathology 2. Hours to be arranged.

Materia Medica.

1. **Materia Medica.** Drugs, their properties, preparations and doses will be taught by recitations, lectures, and laboratory. The ground covered in this course includes the chief inorganic drugs and the antiseptics. A cabinet of the most important medicines has been formed to assist the student in his work. Prerequisites, Botany 5, Anatomy 3, Physiology 2, Pathology 2, Latin 6, French 6, German 9. Fall, 11:00; 1 U.

2. **Materia Medica.** In this course the text-book (provisionally Bartholow, 10th Edition) will be completed, and the regular recitations supplemented by lectures, which will form a larger proportion of the course than in Materia Medica 1. Prerequisite, Materia Medica 1. Winter, 11:00; 1 U.

3. **Materia Medica.** This course is practical as far as possible, including the application of healing agencies of all kinds, with assistance derived from the methods of clinical diagnosis. The instruction will be given by lectures, recitations, and the free use of the chief domestic and foreign periodicals. Each student will be required to make frequent reports before the class of recent therapeutic advance and take part in the discussion of the subjects presented. Prerequisite, Materia Medica 2. Spring, 11:00; 1 U.

Bacteriology.

1. **Bacteriology.** A course of actual laboratory work of two hours daily duration during one quarter, supplemented by lectures and informal talks. The preparation of culture media, the methods of detection and identification of bacteria, and the verification of results by experiment, with the delicate and complicated technique involved, will be thoroughly taught, and, as in Histology 1 and Pathology 2, the student makes a collection of typical specimens. Prerequisites, Histology 1, Pathology 2, Botany 5. Fall, 1:30; 1 U.

2. **Bacteriology.** A course, chiefly consisting of lectures, on the important subjects of Hygiene and Sanitation, with especial reference to the applications of Bacteriology in the entire field. Elective. Hours to be arranged.

Laboratory Fees.

In Histology 1, Pathology 2, and Bacteriology 1, a laboratory fee of five dollars will be charged in each case, to cover the cost of slides, cover glasses and expensive reagents and the inevitable breaking of glassware and apparatus.

Books.

The following books are recommended as text or reference:

Histology, *Stöhr, Clarkson.
Pathology, *Ziegler, *Delafield and Pruden, Orth.
Bacteriology, *Abbott, Sternberg, Flugge.
Materia Medica, *Bartholow, Potter.
Pharmacology, *Cushny.
Therapeutics, *Hare, Ringer.
Urinalysis, Purdy.
Medical Dictionary, Gould, Duane, Dunglison, Billings.
U. S. Dispensatory.
Pharmacopœia.

In every case the latest edition should be bought. In the above list, the books marked with a star will be used as text-books, and others for reference.

Domestic Science.

Assistant Professor Clark and Miss Moreland.

1. **General Hygiene.** This is introductory to Course 2, though complete in itself. Questions relating to the health of the individual are considered: the care of lungs, skin, eyes, digestion, the development of the body by indoor and outdoor exercise, the conservation of nervous and muscular force, and the conditions favorable for physical and intellectual work. Lectures and assigned readings.
Fall, 11:00; S. F.

2. **Home Sanitation.** The house: site, architecture, construction, plumbing and sewerage, heating, lighting and ventilation, furnishing, decorating, cleaning. Lectures, topical investigation and inspection of houses. Winter, 11:00; S. F.

3. **Public Hygiene.** Among the subjects discussed are: the care of streets and alleys, system of sewage and garbage disposal, the inspection of food supplies, the prevention of epidemics, building and plumbing regulations, sanitary regulations. Lectures and research work. Spring, 11:00.

4. **Food Materials.** The sources of food supplies, composition and nutritive value of foods; adulterations. Lectures with the use of charts, models, etc.
Half course. Fall, M. and W., 2:00, S. F.; Spring, M. and W., 2:00.

5. **Selection of Foods.** A continuation of Course 4. The cost of food materials, national foods, dietaries, the chemistry of the preparation of food. Prerequisite, Domestic Science 4.
Half course. Winter, M. and W., 2:00; S. F.

6. **Household and Economics.** The organization of the household, domestic service ,household expenditure, comparative study of family budgets, marketing. Fall, 12:00; S. F.

7. **Principles of Cooking.** This course is intended to illustrate the application of heat to foods and to show the value of staple foods. Course 4 must accompany this.

Fall, T. and Th., 2:00. Spring, T. and Th,, 2:00.

Half course. Fall, 1900, 2:00; S. F.

8. **Advanced Cooking.** A continuation of Course 7. The preparation of more elaborate dishes and of entire meals. Prerequisite, Domestic Science 7. Course 5 must accompany this.

Half course. Winter, T. and Th., 2:00; S. F.

8. **Household Art and Architecture.** The principles of house architecture with historical illustrations; the examination of house plans with reference to their beauty and convenience; a study of decoration and furniture. Spring, 12:00; S. F.

THE COLLEGE OF MEDICINE.

Faculty.

WILLIAM SEAGROVE MAGILL, A.M., M.D., Dean and Professor of Physiology and Pathology.

ALEXANDER REID WHITEHILL, Ph.D., Professor of Chemistry and Toxicology.

FREDERICK LAWRENCE KORTRIGHT, Sc.D., Assistant Professor of Physiological Chemistry.

JOHN BLACK JOHNSTON, Ph.D., Professor of Zoölogy.

LUTHER S. BROCK, M.D., Professor of Materia Medica and Therapeutics.

SPENCER S. WADE, M.S., M.D., Professor of Physiology.

At a meeting of the Board of Regents of the University, held on the 22nd of June, 1900, it was ordered that a College of Medicine be established as one of the coördinate Colleges of the University. During the past year, however, only the two years work of what has hitherto been known as the Premedical Course has been given. Full announcements of the College of Medicine are not yet ready for publication, but will be published in a pamphlet before the opening of the fall quarter, 1901.

PHARMACY.

The proper place of drugs and of the dispensers of drugs is a much discussed question in modern medical literature, but with the present increasing tendency toward specialization and toward raising the standard of medical training, it seems certain that the thoroughly efficient and capable pharmacist who keeps pace with the advancement of therapeutic medicine and the allied sciences will become a more and more necessary part of the medical profession.

The efficiency of the pharmacist is, however, an all important point. The registered pharmacist should not only be able to fill prescriptions with accuracy and intelligence, but he should also be able to ascertain the quality and degree of purity of the drugs and chemicals from which the prescriptions are filled. He should further be competent to make for physicians such chemical and microscopical examinations as the latter may have neither the time nor facilities for making. Lastly, the progressive pharmacist should be able to keep pace with the advance which will certainly be made in the pharmaceutical sciences during the coming three or four decades. In order to do this he must not only have a clear and exact knowledge of chemistry and certain branches of the biological sciences, but he must also be thoroughly conversant with one or two modern languages besides English, especially with the language of the sciences, German.

The Course in Pharmacy offered at the West Virginia University has been planned to meet the above requirements, and it must be emphasized that no student will be permitted to graduate who has not fulfilled them.

Admission to the Pharmacy Course.

The conditions of admission to the Course in Pharmacy are the same as the conditions of admission to the courses leading to the degree of Bachelor of Arts; but no student can complete the course in Pharmacy unless his preparatory work has included nine courses

in English, six courses in German, and six courses in Latin. It is expected that the Bachelor of Science in Pharmacy shall be an older and more mature student than the average college graduate, since his training is not only educational but also professional. Students who expect to take the course in Pharmacy are advised to first complete the following preparatory work:

English,	9 courses;
Latin,	6 courses;
French,	6 courses;
German,	6 courses;
Algebra,	3 courses;
Plane Geometry,	2 courses;
History,	3 courses;
Physics,	2 courses;
Free-Hand Drawing,	2 courses.

These studies can be taken in the Preparatory School.

The Pharmacy Course.

The course in Pharmacy leading to the degree of B.S. in Pharmacy, is to cover four years. It will include the following studies:

German,	3 courses;
Botany,	6 courses;
Zoölogy,	3 courses;
Physiology,	3 courses;
Bacteriology,	1 course;
Chemistry,	12 courses;
Materia Medica,	3 courses;
Pharmacognosy,	1 course;
Theoretical Pharmacy,	3 courses;
Electives,	3 courses;
Thesis,	1 course;
Study of current scientific literature,	3 courses.
	—
	42 courses.

Pharmacognosy.

A course will be given in the recognition of crude drugs, the varieties and sources of the substances used as medicines, and the detection of adulterations. The drug cabinet contains about two hundred selected specimens of crude drugs as bark, seed, leaf, root, gum, etc., and this will be enlarged as required. Constant study of the dispensatory, trade lists, and drugs as they occur in commerce, will train the student in the actual work of drug sampling and buying.

Theoretical and Practical Pharmacy.

Constant study of the best American and German Pharmacopœias and the best pharmaceutical literature will be required throughout these courses. The laboratory work will be entirely individual and will consist of such strictly pharmaceutical work as the students have not learned in the courses in pure Botany and Chemistry. The analysis of drugs, the preparation of medicines from crude drugs, the filling of prescriptions, etc., will take up all time that can be spared for such purposes throughout the last year, and aside from the regular hours, the laboratory will be open to the students of Pharmacy during the afternoons for such work.

Theses.

During his college course, the student of Pharmacy is expected to acquire some facility in reading critically the current literature (English, French, German) which has direct bearing upon theoretical and practical Pharmacy. As evidence of sufficient maturity in this work, the student will be required to produce before graduation a thesis on some pharmaceutical subject. This thesis must contain an adequate review of the work of previous investigators and the report of personal investigations on the subject. The thesis will count as one full course, and the student is expected to give to the investigations not less than four hours laboratory work per week during each of the last two quarters before graduation.

FINE ARTS.

Mrs. Hubbard and Mr. Leonard.

The University provides a large, well lighted studio, containing drawing stands, easels, china kiln, etc., and a large collection of casts and models. Students also have access to the University Museum for study, and to the University Library for works on the history and development of art.

The regular classes in Drawing and the History of Art are open without charge to all students of the University, but in the Crayon and Painting classes moderate fees are charged as follows:

For One Quarter (Twelve Weeks), Three Lessons Weekly:

Special Drawing	$5.00
Crayon	5.00
Water-Color	8.00
China Painting	8.00
Oil Painting	9.00
Pastel Painting	9.00

Students whose work is all in this department and who take only private work are not required to pay the usual University fees, but are entitled to all the privileges of the other University students—Library, lectures, etc. Fees are payable in advance to the Treasurer of the University, for the Art Fund.

Mr. Leonard.

1. **Elementary Drawing.** The historic forms of Art and their development. Lectures, with collateral reading and practice in drawing. Fall, 10:00; 12 S.

2. **Elementary Drawing.** A continuation of Course 1. Winter, 10:00; 12 S.

3. **Elementary Drawing.** A continuation of Course 2. Spring, 10:00; 12 S.

4. **Advanced Drawing.** Historic periods of Architecture, Sculp-

ture, and Painting. Lectures, with collateral reading and practice in drawing. Fall, 11:00; 12 S.

5. **Advanced Drawing.** A continuation of Course 4. Winter, 11:00; 12 S.

6. **Advanced Drawing.** A continuation of Course 5. Spring, 11:00; 12 S.

7. **The History of Greek Art,** with a consideration of the arts of Egypt, Assyria, Phoenicia, and Asia Minor in their relation to Greek Art. Fall, 9:00; 18 U.

8. **The History of Greek Art.** A continuation of Course 7. Winter, 9:00; 18 U.

9. **The History of Mediaeval and Modern Art,** with special consideration of the Renaissance period. Spring, 9:00; 18 U.

Courses 7, 8 and 9 are not open to Freshmen.

Mrs. Hubbard.

10. **Perspective Drawing.** Elementary study of Linear Perspective. Principles studied and applied to the drawing of geometrical forms and familiar objects. Text-book, Honey's "Linear Perspective." Fall, 9:00; 12 S.

11. **Perspective Drawing.** A continuation of Course 10. Analysis of principles. Development and construction of the arch. Minifie's and Spanton's "Perspective." Winter, 9:00; 12 S.

12. **Advanced Perspective Drawing.** A continuation of Course 11. Isometric drawing. Sciography. Perspective applied to buildings, use of plan and perspective erections. Applications to sketching and topography. Reference books: Spanton and Ware. Spring, 9:00; 12 S.

13. **Oil Painting.** Color analysis and combinations. Painting from still life, fruits, flowers, draperies, etc. Landscape painting. Study of the draped model. Hours to be arranged. 12 S.

14. **Pastel Painting.** The various studies of color and design suitable for expression in this medium. Special study for pastel portraits and the draped figures. Hours to be arranged. 12 S.

15. **Water-Color Painting.** Study from the flat and from nature, still life, landscape or model. Design from plant life and conventional. Figure and portrait painting. Hours to be arranged. 12 S.

16. **China Painting.** Study of colors and combinations. Painting from the flat. Study of design of flowers, landscapes, etc., leading to original designs. China burned in the studio kilns. Hours to be arranged. 12 S.

The Regular Art Course.

This course of four years is so planned that the student may acquire not only the technique of drawing and painting, but also a general art education and a degree of æsthetic culture tending to develop individual powers of composition and art expression.

The work of the first year includes light and shade drawing from the antique, study of perspective, sketching from nature, drawings of still life, and study of form carried out in clay modeling.

The second year continues the drawing from cast in charcoal and crayon, copying the head, mask and ornament from the antique. Color studies in water-colors and oil are given alternating with the work in black and white.

During the third and fourth years the student copies the bust and full-length figure from the antique, paints from the draped model in the life class, and studies portrait painting and composition or sketching from nature and landscape painting.

Class lectures are given upon perspective, anatomy, composition, and art history. To those taking this course studio privileges for practice and special study will be given. The course includes painting in oil, water-color, pastel or china paints.

The Normal Art Course.

This course is designed for teachers in public or normal schools. It comprises free-hand drawing of ornament, mask, and head from the antique; study of still life; perspective and mechanical drawing; sketching; study of design; study of color and form developed in water-color painting and clay modeling.

Class lectures are given on the teaching of form and color, and the history of art.

Students should spend two years in pursuing this course; but to suit individual needs, the course may be shortened, and what is most essential will be given in the time available.

THE COLLEGE OF ENGINEERING AND MECHANIC ARTS.

Staff of Instruction.

The Faculty.

JOHN LINDSAY JOHNSTON, C.E., Profesor of Civil and Mining Engineering.

FREDERICK LINCOLN EMORY, B.S., M.M.E., M.E., Professor of Mechanics and Applied Mathematics.

CLEMENT ROSS JONES, M.M.E., Assistant Professor of Mechanical Engineering.

RUSSELL LOVE MORRIS, C.E., Assistant Professor of Civil and Mining Engineering.

RUFUS WEST, Assistant in Metal Working.

Other Instructors Giving Courses in this College.

ALEXANDER REID WHITEHILL, Ph.D., Professor of Chemistry.

JAMES SCOTT STEWART, M.S., Professor of Mathematics.

SAMUEL B. BROWN, A.M., Professor of Geology and Mineralogy.

THOMAS EDWARD HODGES, A.M., Professor of Physics.

CHARLES HENRY PATTERSON, A.M., Professor of the English Language and Literature.

FREDERICK LAWRENCE KORTRIGHT, Ph.D., Assistant Professor of Physiological Chemistry.

JAMES DAVID THOMPSON, A.M., M.Sc., Assistant Professor of Mathematics.

JOHN ETHAN HILL, Ph.D., Instructor in Mathematics.

EVA EMMA HUBBARD, Instructor in Drawing.

GEORGE WASHINGTON CONLEY, A.B., Fellow in Physics.

Organization.

This College comprises the following departments
Civil and Mining Engineering;
Mechanical Engineering and the Mechanic Arts;
Mechanics and Applied Mathematics.

The requirements for admission and graduation and the arrangement of the courses of instruction, and such other work as pertains to this College, are provided for by its Faculty, in conjunction with the University Faculty.

Equipment and Facilities for Instruction.

The chemical, metallurgical, physical, electrical, geological and photographic laboratories are located in Science Hall, as well as the geological museum and the civil engineering laboratory, instrument-room and drawing-room. In the new Engineering Building* will be located the lecture and recitation rooms of that department, as well as the woodworking and metalworking shops, the drawing and model rooms, the mechanical, steam, hydraulic, and electrical engineering laboratories, and the electric-light and power plant of the University.

The engineering students have thus at their command a large and varied collection of apparatus and instruments, of tools and machinery, of stock and material, which is being judiciously increased from year to year. In the drawing-rooms are collections of models of bridges, furnaces, structures, mechanisms; engines, pumps, valves and valve gear; plaster casts and descriptive geometry models; sets of charts, State and Government maps, surveys, photographs, engineering specifications, drawings, tracings and blue prints.

In the workshops are bench and machine tools and workshop appliances for working wood and metal, with a selected variety of measures, gauges, small tools, stock and material.

The engineering laboratories are to be fitted with standard gauges and measures, calculating and recording instruments, with apparatus and appliances for qualitative and quantitative experimental work in civil, mechanical, steam, hydraulic and electrical engineering. The boilers, engines, pumps and condensers from the

*The old Mechanical Building was destroyed by fire March 4, 1899. Since this date temporary quarters have been provided in Science Hall for the regular lectures and class room work and for instruction in Mechanical drawing and designing. During the present year, North Fife Cottage has been fitted up for shop work and instruction in manual training, and the Mechanic Arts has been given regularly throughout the year. A considerable amount of apparatus has also been installed in the Fife Cottages and Science Hall, thus providing for instruction in Experimental Engineering. The new Enginering Building is now in process of construction, and it is expected that it will be ready for occupancy by the opening of the Fall term of this year, 1901.

old Mechanical Building will be installed in the new building. New dynamos, motors, electrical machinery and other motive power machinery of modern type will be specially selected and arranged for experimental work in Mechanical and Electrical Enginering.

Samples of raw materials and manufactured products are collected, forming the nucleus of an engineering museum. The latest trade literature, catalogues and reports of the current commercial developments in engineering are kept in classified files for the students' reference.

The University Library has a thoroughly classified and indexed collection of the standard and latest books in engineering and the allied sciences, complete bound sets of the transactions of several scientific and engineering societies; and current issues and bound volumes of the principal scientific and technical periodicals.

The regular and special courses offered by this College are designed to meet the requirements of the technical and professional lines of work leading to the engineering degrees indicated and to active professional work.

Methods of Instruction.

In the classroom instruction is given by lectures, combined with text-book study and recitation. Enginering problems and subjects are assigned to be worked out in the library or drawing-room, in the field, the shop or the laboratory. The several lines of work in any given study are co-ordinated so far as possible, as noted in schedules of this College. In this way time is economized. The student concentrates his attention, focalizing it upon the particular question, problem or project in hand. The classroom instruction is supplemented throughout by practical work in the field and drawing-room, shops and engineering laboratory. Visits of inspection to industrial establishments and power plants are made whenever it is possible to arrange for them.

The method of instruction in Manual Training and the Mechanic Arts is largely that of the shop exercise system, by which the students is familiarized with the fundamental operations of constructive mechanics. Later on such instruction is combined with the work of construction of machine elements, tools and apparatus. Attention is given to the economics of time and material by use of the shop-order system in accounting for the same.

In engineering drawing and designing the work is carried along with the study of actual typical details of structural elements, and, where possible, parallel with the construction of similar elements or exercises in the laboratories and mechanical shops. Frequent reference is made to models, to blue prints of engineering structures and to existing work in the institution or elsewhere. An opportunity is

also afforded for the necessary graphical treatment of engineering problems arising in lectures and the classroom instruction of any quarter.

Lectures, field practice, mimeograph notes, collateral reading, conference work and sketching accompany all the practical lines of work.

In Experimental Engineering, the students are required to make scientific observations, keep records of tests, facilitate deductions therefrom by the use of calculating instruments, tabulate and plot results and make reports upon the test in due form. Each member of the class is required to use and to become familiar with all the instruments and apparatus of any given course. The classes are divided into groups of three or four students and furnished with mimeographed notes and forms.

Requirements of Admission to Engineering Courses.

The conditions for admission to the regular four years engineering courses are as follows:

Arithmetic,	1 course;
Algebra,	4 courses;
Plane and Solid Geometry,	3 courses;
Physics with laboratory,	2 courses;
Chemistry with laboratory,	3 courses;
New England requirements in English,	9 courses;
Foreign Language,	6 courses;
History,	2 courses;
Free Hand Drawing,	2 courses.
Total,	32 courses.

The following substitutions may be made. One year of ancient language may be substituted for one year of modern language. One year of modern language in the freshman year may be substituted for one year of Chemistry, the Chemistry to be taken in the freshman year. Trigonometry or higher Algebra may be taken in the Preparatory.

Engineering Preparatory Schedule.

FIRST YEAR.

HOUR.	FALL.	WINTER.	SPRING.
8:00	English 1	English 2	Algebra 1
9:00	Arithmetic	American History	English 3
10:00			History
11:00	French or German	French or German	French or German

		SECOND YEAR.	
8:00	Algebra 2	Algebra 3	Plane Geometry
9:00	Freehand Drawing 1	Freehand Drawing 2	
10:00	French or German	French or German	French or German
11:00	English 4	English 5	English 6
		THIRD YEAR.	
8:00	Plane Geometry	Solid Geometry	Trigonometry, or Higher Algebra
9:00	Chemistry	Chemistry	Chemistry
10:00	English 7	English 8	English 9
11:00	Physics 1	Physics 2	

Admission to Special Courses.

Students under twenty-one years of age desiring to take special courses in the College of Engineering and the Mechanic Arts are required to present the same qualifications as candidates for one of the regular courses in this College. Students twenty-one years of age or over who are not candidates for an Engineering degree, but who wish to pursue special studies along engineering lines, will be permitted to do so upon giving satisfactory evidence that they are prepared to take the desired studies advantageously; but if they subsequently desire to become candidates for a degree or to take a regular course in engineering they must pass the required entrance examination for that year.

Admission to Advanced Standing.

Students from other institutions will be admitted to advanced standing upon the same conditions under which students of this University are allowed to advance, namely:

A student to be registered as a Freshman must not be more than three courses behind his class; to be registered as a Sophomore, Junior, or Senior he must have completed the required work of his course, including entrance examinations up to the beginning of the preceding year; and if a Sophomore, must not be more than three courses, or, if a Junior or a Senior, not more than two courses behind his class.

No student can be admitted as a candidate for either of the baccalaureate degrees in Engineering after the beginning of the fourth year.

Engineering Courses Offered in this College.

The following degree courses are offered:

1. A four years undergraduate course leading to the degree of Bachelor of Science in Civil Engineering;

2. A four years undergraduate course leading to the degree of Bachelor of Science in Mechanical Engineering;

3. A four years undergradute course in Electrical Engineering leading to the degree of Bachelor of Science in Mechanical Engineering.

4. A graduate course leading to the degree of Civil Engineer;

5. A graduate course leading to the degree of Mechanical Engineer;

The following special courses are offered:

1. Groups of elective courses for Bachelor of Arts Students taking work in engineering subjects.

2. Special courses in Civil, Mechanical, and Electrical Engineering, for students who do not desire an engineering degree.

3. Special courses in Manual Training for teachers.

4. Special courses in the Mechanic Arts for artisans, mechanics, apprentices, stationary engineers, electricians, etc.

GENERAL DESCRIPTION OF ENGINEERING COURSES.

Undergraduate Courses in Engineering.

These four years courses lead respectively to the degrees of Bachelor of Science in Civil Enginering and Bachelor of Science in Mechanical Engineering. They consist of forty-eight full prescribed courses as detailed below under the heading "Requirements of Courses." Undergraduates in this College, however, are allowed to specialize in those branches permitting a certain amount of specialization, but they may not take less than three nor more than four courses in any one quarter.

The object of these courses is to enable young men who have pursued successfully the prescribed studies to enter upon the proper development of the professional work with intelligence and well directed application. Fundamental training is given in the arts and sciences of engineering. Academic courses are provided containing the elements of a liberal education. These form the best preparation for future professional work and constitute the proper foundation upon which one may build successfully his professional career and reputation. Thorough technical and practical instruction follow —training a student to meet the demands and to discharge faithfully the duties of his early engineering work, enabling him to keep pace with engineering progress and to prepare to meet the obligations of responsible work later in his career.

Graduate Courses in Engineering.

These lead to the professional degrees of Civil Engineer and Mechanical Engineer respectively. They consist of eight advanced engineering courses and a thesis, and require one year (three quarters) of resident study and work at the University.

Candidates for these professional degrees are required to have completed the prescribed four years course of undergraduate study in that department of this College in which they propose to take a degree, or to have completed such a course or its equivalent at some other institution of recognized standing conferring the same or an equivalent baccalaureate degree. In this case the diploma and other certificates of proficiency should be presented.

Special Engineering Courses.

Deserving young men who have not the time or are otherwise unable to take the full course will be allowed to take a special or partial course, consisting of such studies as they are prepared to take up, provided that such partial course shall have been approved by their class officer.

These consist of groups of electives for Bachelor of Arts students, and for special students taking work in engineering subjects. The latter are especially designed for surveyors, manual training teachers, and for others who are equipping themselves for some particular field of engineering, commercial, or industrial work.

These lines of work afford opportunity for specializing in the undergraduate departments of the Engineering College. Students who do not propose to take a full course leading to a degree in Engineering may, nevertheless, be quite fully prepared to take up certain lines of profitable study and work during their residence at the University.

Theses.

Every candidate for a baccalaureate or graduate degree in Engineering will be required to prepare a thesis on some subject relating to a special branch of engineering or other department of applied science. The thesis must be either a design or a review of some machine, structure or process belonging to some department of scientific investigation. It must be fully elaborated and accompanied by the necessary working drawings or models required for the proper elucidation of the subject of the thesis.

With its accompanying drawings it will be presented first to the professor under whose guidance it has been prepared. It must be accepted by the head of that department in which the degree is to be conferred and approved by a special committee appointed for

that purpose. A typewritten copy of the thesis, prepared according to the official specifications for theses, must be placed in the University Library before graduation.

Engineering Society.

The Engineering Society is organized in connection with the Engineering departments. It is conducted by the students of these departments, and meets once a week. Its object is the investigation and discussion of scientific subjects. All engineering students are requested to join this organization and perform such work as its rules require. Students taking either of the four-year courses leading to the baccalaureate degrees in Engineering are expected to engage actively for three years in the work of the Society.

Donations.

The College of Enginering desires to express its thanks for the generosity and courtesy of the Baltimore and Ohio Railroad Company for the valuable passenger locomotive which that Company recently donated to the University. The locomotive when mounted will prove a valuable addition to our laboratory equipment, and will enable the College to enlarge its course of instruction so as to include Railway Mechanical Engineering.

In a similar way the College wishes to acknowledge the gift of valuable samples of boiler tubes, braces and flanges by Joseph T. Ryerson and Son of Chicago.

Undergraduate Course in Civil and Mining Engineering.

This is a four years course leading to the degree of Bachelor of Science in Civil Engineering. It has been planned with a view to laying a broad and substantial foundation for the general and technical knowledge needed by practitioners in civil engineering; so that graduates, guided by their theoretical education, and the practical training they may get during the course, may find profitable employment in the line of their profession and develop into useful investigators and scientific constructors.

The work of the students is based upon an extended course on the Mechanics and Economics of Engineering. The object aimed at is to give as thorough a preparation as possible for the general purposes of the profession in the following subjects: The survey, location and construction of railroads, tramways, elevated railroads, tunnels and aqueducts; the design and construction of girder, truss and suspension bridges, of towers, roofs and arches of stone and iron; hydrographical and topographical surveys of rivers and harbors, coast and geodetic surveys; the determination of latitude and longitude and the location of true meridians; the projection of

maps, the construction of working drawings, plans and specifications of various engineering structures; the design and construction of machines and the determination of their efficiency; the tests and selection of the materials of engineering; the design and construction of metallurgical works; the surveys of water works, canals, levees, revetments and retaining walls; the construction of coke ovens and the design of coal and coke plants; the construction and superintendence of power and power plants; the economic theories of railroad location and construction, track work and the maintenance of way of railroads; the design and construction of hydraulic motors, and a course of instruction in mining, especially adapted to the coal and ore mining peculiar to West Virginia.

Requirements for degree of Bachelor of Science in Civil Engineering:

Higher Algebra or Trigonometry,	1 course;
Analytical Geometry,	1 course;
Differential Calculus,	1 course;
Integral Calculus,	1 course;
Electrical Engineering,	1 course;
Mechanics,	2 courses;
Strength of Materials,	1 course;
Descriptive Geometry,	2 courses;
French or German,	3 courses;
Rhetoric,	2 courses;
Projection Drawing,	1 course;
Geology,	3 courses;
Physics,	4 courses;
Land Surveying,	1 course;
Analytical Chemistry,	1 course;
Railroad Surveying,	1 course;
Railroad Construction,	1 course;
Roads, Streets, and Pavements,	1 course;
Topographical Surveying,	1 course;
Graphic Statics,	½ course;
Mine Surveying,	½ course;
Mechanical Drawing,	2⅓ courses;
Metallurgy,	1 course;
Eng. Testing Laboratory,	1 course;
Hydraulics,	1 course;
Power,	2 courses;
Stereotomy,	2 courses;
Roofs and Bridges,	1 course;
Bridge Design,	1 course;
Municipal Engineering,	1 course;

Sanitary Engineering,	1 course;
Railroad Economy,	1 course;
Materials of Construction,	1 course;
Mining Engineering,	½ course;
Engineering Jurisprudence,	½ course;
Civil Eng. Laboratory,	⅔ course;
Thesis,	1 course;
Total,	48 courses;

Distribution of the Work for the Degree of B. S. C. E.

FIRST YEAR.

HOUR.	FALL.	WINTER.	SPRING.
8:00	French or German	French or German	French or German
9:00	Rhetoric 1	Projection Drawing	Rhetoric 2
10:00	Higher Algebra or Trigonometry	Analytical Geom.	Differential Calculus
11:00	Geology	Geology	Geology

SECOND YEAR.

8:00	Integral Calculus	Mech. Drawing ⅓	Mechanics
9:00	Mech. Drawing ⅓	Mechanics	Mech. Drawing ⅓
10:00	Physics	Physics	Physics
11:00	Descriptive Geom.	Descriptive Geom.	Land Surveying
P. M.	Anal. Chem. ⅓	Anal. Chem. ⅓	Anal. Chem. ⅓ Field Practice

THIRD YEAR,

8:00	Railroad Surveying	Railroad Construction	Roads, Streets and Pavements
9:00	Mechanics.	Electrical Engineering.	Physics.
10:00	Typhographical Survey	Mech. Drawing ⅔	Graphic Statics Mine Surveying
11:00	Mech. Drawing ⅔	Metallurgy	Hydraulics
P. M.	Test. Laboratory ⅓ Field Practice	Test. Laboratory ⅓	Test. Laboratory ⅓ Field Practice

FOURTH YEAR.

8:00	Power	Power	Thesis
9:00	Stereotomy	Bridge Design	R. R. Economy
10:00	Roofs and Bridges	Stereotomy	Materials of Construction
11:00	Municipal Eng.	Sanitary Eng.	Mining Eng. ½ Engineering Jur. ½
P. M.	Engineering Lab. ⅓	Engineering Lab. ⅓	

Note.—One-third of a course means five hours per week in draughting room or laboratory for one full term. One-half course means daily recitations for six weeks.

Undergraduate Course in Mechanical Engineering.

This is a four years course leading to the degree of Bachelor of Science in Mechanical Engineering. It seeks to develop the principles and to prepare for intelligent work involving the design, selection, cost, construction, installation, testing and management of power generators, prime movers, and machinery for manufacturing, transportation and power transmission; the planning, equipment, cost, construction and management of manufacturing plants, shops, factories, lighting, heating and ventilating.

The departmental equipment has recently been strengthened by the gift of the locomotive previously mentioned. This engine, in connection with the other new machinery to be installed during the coming year, will afford ample facilities for the study of Railway Mechanical Engineering, in addition to the other courses offered. It is the intention to develop this branch of mechanical engineering as rapidly as possible, but at present the exact nature of the courses to be offered cannot be announced.

Students pursuing this course may elect either the Mechanical or the Electrical alternative of the fourth year, receiving in either case the degree of Bachelor of Science in Mechanical Engineering. After the year 1901-2, it is expected that a fourth year alternative can be offered in Railway Mechanical Engineering.

This provision has been made to meet the requirements of those who may wish to specialize in either the steam engineering or the electrical branches of this profession.

Bachelor of Science in Mechanical Engineering.

The degree of Bachelor of Science in Mechanical Engineering will be conferred upon any student who satisfies all entrance requirements and satisfactorily completes the following forty-five and one-half college courses:

French or German,	3 courses;
Rhetoric,	1 course;
College Algebra or Trigonometry,	1 course;
Analytic Geometry,	1 course;
Calculus,	2 courses;
Geology,	2 courses;
Analytic Chemistry,	1 course;
Physics,	3 courses;
Descriptive Geometry,	1 course;

Mechanics,	2 courses;
Strength of Materials,	1 course;
Mechanic Arts,	5 courses;
Mechanism and Machinery,	1 1-5 courses;
Machine Design,	3-5 course;
Mechanical Engineering Designing,	3-5 course;
Drawing and Design,	5 courses;
Valves and Valve Gears,	3-5 course;
*Steam Engine Design,	3-5 course;
*Steam Boilers,	3-5 course;
*Dynamos and Motors,	1 course;
**Dynamo Electric Machinery,	2 courses;
**Electric Engineering,	1 course;
*Hydraulics,	1 course;
Development and Utilization of Power,	2 courses;
Thermodynamics of Engineering,	1 course;
Prime Movers,	3-5 course
Power Transmission,	1 course;
Engineering Jurisprudence,	½ course;
Experimental Engineering,	2 1-5 courses;
Thesis,	1 course;
Total,	45½ courses;

*May be substituted in fourth year for electrical alternative.
**Substitutions permissible, mechanical alternative.

Distribution of the Work for the Degree of Bachelor of Science in Mechanical Engineering.

FIRST YEAR.

HOUR.		FALL.	WINTER.	SPRING.
8:00				Rhetoric 1
9:00		French or German	French or German	French or German
10:00		Adv. Algebra	Anal. Geometry	Diff. Calculus
11:00		Geology	Geology	
1:00	M., W.	Mech. Drawing 18 (2-5)	Mech. Drawing 19 (2-5)	Mech. Drawing 20 (2-5)
1:00	F.	Woodworking 1	Pattern-Making 3	Foundry 5
8:00	S.	and 2 (3-5)	(3-5)	(3-5)

SECOND YEAR.

8:00		Int. Calculus		
9:00			Mechanics 2	Mechanics 3
10:00		Physics 6	Physics 7	Physics 8
11:00		Des. Geometry	Mechanism 34	Mechanism 35
1:30	T., Th.		(3-5) M., (W., F.)	(3-5) M., (W., F.)
		Anal. Chem. 5 (⅓)	Anal. Chem. 6 (⅓)	Anal. Chem. 7 (⅓)

1:00 F.	Mech. Drawing 21 (⅓)	Mech. Drawing 22 (⅓)	Mech. Drawing 23 (⅓)
8:00 S.	Forging 4 (⅓)	Tin and Pipe 6 (⅓)	Machine Work 7 (⅓)

THIRD YEAR.

8:00	Power 11	Power 12	Thermodynamics 37
9:00	Str. Materials 4	Dyn. and Motors 17	Elect. Machinery
10:00	Machine Design 30 (3-5) (M., W., F.)	Valve and Valve Gears 32 (3-5) (M., W., F.)	
11:00			Hydraulics
1:00 T.,Th.	Machine Work 8 (2-5)	Machine Work 9 (2-5)	Machine Work 10 (2-5)
1:00 F.	Mach. Drawing 24 (⅓)	Mach. Drawing 25 (⅓)	Mach. Drawing 26 (⅓)
8:00 S.	Exp. Mechanics 43 (⅓)	Testing Mater. 45 (⅓)	Power Meas. 44 (⅓)

FOURTH YEAR.

8:00	Prime Movers 41 (3-5) (M., W., F.)	M. E. Design 33 (3-5) (M., W., F.)	Thesis
9:00	St. Eng. Design 36 (3-5) (M., W., F.)	St. Boilers 38 (3-5) (M., W., F.)	Power Trans. 42
10:00	Dyn. Elect. Mach. 49	Elect. Lt. & Ry. Mach. 50, 51	Eng. Juris. (½)
1:00 M.,W., F	Drg. & Design 27 (2-5)	Drg. & Design 28 (3-5)	Drg. & Design 29 (3-5)
1:00 T., Th.	Mach. Const. 13 (2-5)	Mach. Const. 14 (2-5)	
8:00 S.	Eng'g. Lab. 46 (2-5)	Eng'g. Lab. 47 (2-5)	Eng'g. Lab. 48 (2-5)

Fourth Year. Mechanical Alternative.

The same as the above except that candidates may upon approval of the head of the Department substitute for Mechanical Engineering courses 49, 50, and 51, two elective courses from those offered by the Department of Mechanical Engineering or the Department of Applied Mathematics.

Fourth Year. Electrical Alternative.

Candidates for the degree of B.S.M.E. may upon the approval of the head of the Department, substitute for Mechanical Engineering Courses 36 and 38, an equivalent amount of electrical work in the College of Engineering or the Department of Physics.

Students in the Mechanical Engineering course who offer Mechanic Arts for admission will elect an equivalent amount of work in place of college Mechanic Arts.

Manual Training Courses.

The first group consists of Courses 1, 2, 3, (Mechanical Engineering), consisting of shop practice in wood and metal working. The second group consists of mechanical drawing, Courses 21, 22, 23 (Mechanical Engineering), and shop practice in wood and metal working, Courses 1, 2, 3, 4, 5, 6, 7, 8, 9 (Mechanical Engineering). These courses aim to present the simple elements of some of the constructive arts which admit of being developed into a logical series of exercises. Their merit is chiefly educational rather than as possessing any intrinsic value in relation to the several branches of handicraft work from which they are taken. The primary object is the training of the eye to see the form of objects, and of the hand to produce such forms in the materials most commonly used in constructive work. At the same time the student is acquainted with the use of the fundamental tools and with the accuracy called for in the production of the elements of construction and of simple combinations of the same in fitting parts of the work together. There is sufficient instruction in handicraft work and practice to form a proper foundation for the more advanced work with machine tools in mechanical construction, and these courses are, therefore, required of all students taking the full course in Mechanical Engineering.

Students who wish to become more proficient in the use of tools or who are preparing themselves for positions as foremen in industrial establishments, may take additional work in the shop in which they wish to specialize. Instruction will be given in the maintenance and repair of machinery, and opportunity will be afforded for the construction of new machines and apparatus for the University, as well as the working up in the shops of original designs which have been approved by the head of the Department. All students in Mechanical Engineering are recommended to take advantage of this provision and devote as much time as possible to shop and drawing-room practice.

Until the completion of the new Engineering Building not all of the work detailed above can be given, but enough to meet the immediate needs of the students will be carried on in the basements of the present buildings or in a special building provided for this purpose. The work will be supplemented by visits of inspection to local shops and industrial plants.

DEPARTMENTS OF INSTRUCTION.

Each of the courses of instruction offered by the Engineering departments is known as a full course unless otherwise stated; that is, a course of five class exercises a week for one quarter, or their equivalent in laboratory or other practical work. When no instructor's name is appended to a course, such course will be given by the head of the department.

The following branches of applied science and engineering are represented in the courses offered by the Engineering departments:

Civil Engineering.	Mechanical Engineering.
Designing.	Metallurgy.
Drawing.	Mining Engineering.
Electrical Engineering.	Municipal Engineering.
Experimental Engineering.	Railroad Engineering.
Hydraulic Engineering.	Sanitary Engineering.
Mechanics.	Steam Engineering.
Mechanic Arts.	Structural Engineering.
Applied Mathematics.	Surveying.

Civil and Mining Engineering.

Professor John L. Johnston and Assistant Professor Morris.

Courses for Undergraduates.

1. **Projection Drawing.** Orthographic projections in one quadrant; elementary problems in shades and shadows; isometric and oblique projections. Lectures and recitations. Drawing-room work. Warren's "Industrial Drawing," Part III, and Faunce's "Descriptive Geometry." Assistant Professor Morris. 14 S.

2. **Descriptive Geometry.** Orthographic projections in the four quadrants; problems of the point, line and plane; tangencies and the development of single-curved surfaces. Warren's text-books. Assistant Professor Morris. 14 S.

3. **Descriptive Geometry.** Single-curved, double-curved and warped surfaces; intersections, tangencies and developments; shades, shadows and perspective. Lectures and recitations. Warren's text-books. Assitant Professor Morris. 14 S.

4. **Mechanical Drawing.** Detail shop drawing. Constructions in Descriptive Geometry. Platting the survey. Thorne's "Junior and Intermediate Courses in Drawing."

5. **Land Surveying.** Theory and practice of land surveying; magnetic variations; calculating the content; retracing old lines; division of lands; establishment of meridians; care and use of instruments; mapping the survey; field practice. Lectures and recitations. Gillespie's "Surveying."

Assistant Professor Morris. 14 S.

6. **Railroad Surveying.** Theory and practice of railroad surveying. Lectures, recitations and field work.

Assistant Professor Morris. 14 S.

7. **Topographical Surveying.** Theory and practice of topographic, hydrographic and barometric surveying, city surveying, etc. Lectures and recitations. Gillespie's "Higher Surveying."

Assistant Professor Morris. 14 S.

8. **Mechanical Drawing.** Engineering drawing, detail shop drawings, etc. Laboratory. Thorne's "Senior Course in Mechanical Drawing."

9. **Railroad Construction and Maintenance.** Tunnels, trestles, track work, earth work, signalling, graduation, masonry, etc. Tratman's "Track and Trackwork." Assistant Professor Morris. 14 S.

10. **Mechanical Drawing.** Topographical drawing, working drawings in railroad construction, etc. Thorne's "Senior Course" completed.

11. **Roads and Pavements.** Location, construction and maintenance; study and comparison of the various types of roads; road-making material. Lectures. Assistant Professor Morris. 14 S.

12. **Graphic Statics.** Graphic method of determining stresses, moments and shears in roof and bridge trusses. Merriman's "Roofs and Bridges," Part II.

Half course. Assistant Professor Morris. 14 S.

13. **Mine Surveying.** Theory and practice of underground surveying. Lectures and recitations.

Half course. Assistant Professor Morris. 14 S.

14. **Hydraulics.** Theoretic pressure and energy of water; flow of water through orifices, tubes and weirs; flow in conduits, pipes, canals, brooks, and rivers; current meters, water motors, water wheels and naval hydromechanics. Lectures and recitations. Merriman's "Hydraulics."

15. **Stereotomy.** Stone-cutting, plain and decorative. Recitation and laboratory. Warren's "Stone Cutting."

Assistant Professor Morris.

16. **Stereotomy.** Stone-cutting; pattern-making; cutting stones in clay. Laboratory. Warren's "Stone Cutting."

Assistant Professor Morris.

17. **Roof and Bridge Design.** Determinations of stresses, shears, and bending moments, in various types of roof and bridge trusses by analytic methods. Lectures and recitations. Merriman's "Roofs and Bridges," Parts I and III.

18. **Bridge Design.** Complete designs of the plate girder and the Pratt truss. Recitations, lectures and laboratory. Merriman's "Roofs and Bridges," Parts III and IV.

19. **Municipal Engineering.** Water supply. Purification, etc. Reservoirs, Water Mains, etc.

20. **Sanitary Engineering.** Sewers and drains. House Drainage, sewage disposal.

21. **Testing Materials of Engineering.** Tensile, commpressive and transverse tests of wrought iron, cast iron, steel and timber; transverse, compressive and absorption tests of stone and brick; tensile, compressive, specific gravity and absorption tests of cement; also tests for fineness, time of setting and constancy of volume; testing lubricating value of oils, including composition, viscosity, specific gravity, flash and burning tests, cold test and coefficient of friction.

22. **Railroad Economy.** General theory of railroad location and construction, from the inception of the project to the completion; effects of grades, curvature and distance on operating expenses and revenue; railroad finance and management. Lectures.

23. **General Engineering Construction.** Materials of engineering; foundations; retaining walls; masonry and pile construction, etc. Lectures and recitations.

24. **Mining Engineering.** Coal and ore mining peculiar to the bituminous coal regions; the inception, construction and operation of mining plants; the gases of coal mines and their treatment. Lectures and recitations.

25. **Thesis.** Required of Civil Engineering Seniors.

Courses for Graduates.

Hours to be Arranged.

26. **Bridge Design.** Double trusses; arched upper chords.
27. **Bridge Design.** Suspension, cantilever and swing bridges.
28. **Electrical Engineering.**
29. **Hydraulic Motors.**
30. **Heating and Ventilation of Buildings.**

31. **Masonry.** Dams, foundations, arches, piers, and abutments.

32. **Engineering Drawing and Design.**

33. **Building Superintendence.** Detail study of construction and methods. Half course.

34. **Steel Framed Structures.** Elevated roads, water towers, high buildings, inclines.

35. **Thesis.** One course. Required of candidates for the degree of C.E.

Note.—Candidates for the degree of C.E. will be allowed to specialize on lines of their own choice, subject to the direction and approval of the Professor of Civil and Mining Engineering.

Mechanical Engineering and the Mechanic Arts.

Assistant Professor Jones and Mr. West.

Courses for Undergraduates.

1 and 2. **Woodworking.** (1) includes instruction in carpentry, joinery and other bench work; exercises with the fundamental edge tools in soft and hard woods, and in matching, molding, joining and making typical framed work. (2) Woodturning. Comprises the fundamental geometric forms in soft and hard woods; fitting forms of reversed curves; face plate work, chucking, boring, finishing and polishing, and elements of pattern-making. *Three-fifths course.

Freshmen; Fall, Friday, 1 to 5, and Saturday, 8 to 12.

3. **Pattern-Making.** Applies the foregoing instruction in its relation to patterns for machine construction, considers the types of patterns and usual allowances for draft, shrinkage and finish, with exercises in making patterns of machine elements and other work to be executed in the machine shop. Three-fifths course.

Freshmen; Winter, Friday, 1 to 5, and Saturday, 8 to 12.

4. **Forging.** Exercises in drawing out and sizing, forming, welding, jointing and fitting iron; steel forging, tempering, annealing; making typical tools to be used later in the machine shop; manner of working forges; determining quality of iron and steel and strength of the students' welded joints.

One-third course. Sophomores; Fall, Saturday, 8 to 12.

5. **Foundry.** Molding and casting in connection with pattern-making; selection, preparation and use of molding, facing and part-

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*Minimum requirements for regular students. Special students may take as much additional in any branch of machine arts as their time permits.

ing sands; use of typical molders' tools and appliances; making castings from exercise patterns and from those for machine work.

Three-fifths course. Spring, Friday, 1 to 5, and Saturday, 8 to 12.

6. **Tin-Smithing and Pipe-Fitting.** Brazing, tinning, forging and use of coppers; seamless and solder-jointed work in tin and sheet-iron; laying out, cutting and forming sheet-metal; solder joints for electrical fitting; bending and coiling pipe; making joints and use of packing; drilling and tapping for pipe and bolt-holes in boiler plate; soft and hard patches; tank and boiler riveting, caulking and tube expanding.

One-third course. Winter, Saturday, 8 to 12.

7. **Machine Work.** Tool smithing, iron work at the bench, chipping, filing, fitting, scraping, polishing; key-seating; formation of straight-edges, surface-plate. Handwork with machine tools, drilling, tapping. One-third course. Spring, Saturday, 8 to 12.

8, 9, 10. **Machine Tool Work.** A continuation of Course 7, Mechanical Engineering; machine tool work with drill-press, lathe, shaper, planer, emery grinder, and milling machine; production of typical details of machine tools and other workshop appliances.

Each Two-fifths course.

Fall, Winter, Spring, Saturday, 8 to 12.

13, 14, 15. **Mechanical Construction.** Reproduction of typical details of steam-engine and other motive-power machinery; work from original designs; manufacture of special apparatus for shop and laboratory use; practice in building, assembling and erecting workshop and engineering appliances, motive-power machinery and accessories, and in attendance on the same. Each two-fifths course.

Fall, Winter, Spring, Tuesday, Thursday, 1 to 4.

16. **Electrical Construction.** Mechanical repairs to dynamos and motors, babbitting and boring out bearings, fitting brushes, truing commutators; winding field coils; making switches and rheostats. Elective. Time as assigned.

18, 19, 20. **Mechanical Drawing.** Plain lettering, care and use of drawing instruments, selected geometric constructions, line exercises, finished drawings. Isometric, cabinet, and orthographic projection and perspective. Working drawings from models and blue prints, tracing and blue printing. Mimeographed notes, blue prints. Tracy's "Mechanical Drawing" and "Reinhardt's Lettering."

Each two-fifths course.

Fall, Winter and Spring, Monday, Wednesday, 1 to 4.

21, 22, 23. **Mechanical Drawing.** Drawings of machine parts from sketches, details of mechanical movements and drawings of machine parts worked out in Courses 34 and 35, Mechanical Engineering, respectively. Lectures and drafting.

Each one-third course.

Fall, Winter and Spring, Friday, 1 to 5.

24, 25, 26. **Machine Drawing.** Drawing-room practice accompanying Courses 30 and 32, Mechanical Engineering, respectively; conventional methods, detail and assembled drawings, tracing and blue printing, chiefly of valve gears and machine parts worked out in the theoretical courses which they accompany.

Each one-third course. Fall, Winter, Spring, Friday, 1 to 5.

27. **Drawing and Designing.** Drawing-room practice accompanying Course 36 Engineering; as far as possible complete drawings of an engine are made from calculations and designs developed in Course 36. Students taking the electrical alternatives are allowed to specialize.

Three-fifths course. Fall, Monday, Wednesday, Friday, 1 to 4.

28. **Drawing and Designing.** Continuation of Course 27 and drawing-room and office work accompanying Course 33, Mechanical Engineering. References made chiefly to blue prints and mechanical drawings of actual power and manufacturing plants.

One-half course. Winter, Monday, Wednesday, Friday, 1:30.

29. **Drawing and Designing.** Continuation of Course 28 and specialized engineering drawing. Prerequisite, Course 28, Mechanical Engineering.

Three-fifths course. Mon., Wed., Fri., 1:00 to 4:00.

30. **Machine Design.** Elements in machine design, conventional and rational; adaptation of commercial sizes; proportioning fastenings, flanges, bearings, rotating pieces, connecting links and machine supports; mechanics of machinery; influence of material and treatment on design. Lectures, recitations and drawing, Course 24. Unwin's "Machine Design;" F. R. Jones' "Machine Design." Three-fifths course. Monday, Wednesday, Friday, 10.

32. **Valves and Valve Gears.** Comparison of valve diagrams; analysis and design of valves and valve gears. Prerequisite, Course 31, Mechanical Engineering. Lectures, recitations and drawing, Course 25. Three-fifths course. Winter, Mon., Wed., Fri., 10:00.

33. **Mechanical Engineering Design.** Embodies the details of the earlier courses of instruction in Prime Movers and motive-power machinery in respect to the design of steam and electric power and hydraulic plants for power transmission and manufacturing purposes; location of the plant; selection, arrangement, subdivision into units and installation; economics, organization and management of power and manufacturing plants; engineering specifications. Lectures and accompanying Course 28, Mechanical Engineering. Three-fifths course. Winter, 8:00.

34. **Mechanism and Machinery.** Analysis and classification of mechanisms, diagrams and relative velocities of machine parts; principles of transmission and change motions by linkages, rolling contact, toothed gearing, couplings, belt gearings, cams, parallel and

straight-line motions; analysis of motions in simple machines. Supplemented by practical applications, Course 27, Mechanical Engineering. Lectures and recitations. Barr's "Kinematics of Machinery."

Three-fifths course. Winter, Mon., Wed., Fri., 11:00.

35. **Mechanism and Machinery.** Continuation of Course 34, Mechanical Engineering; classification and analysis of machinery with special attention to work-shop appliances, machine tools and machinery of transmission. Prerequisite, Course 34, Mechanical Engineering. Lectures, recitation and drawing, Course 23.

Three-fifths course. Spring, Mon., Wed., Frid., 11:00.

36. **Steam Engine Design.** Comparison of rational and empirical formulae; complete design of simple engine. Supplemented by Course 27, Mechanical Engineering. Lectures and recitations. Three-fifths course. Fall, Mon., Wed., Frid., 9:00.

37. **Thermodynamics of Engineering.** Mechanical theory of heat; thermodynamics of gases and vapors, with special application to steam and other heat engines, air and refrigeration. Prerequisites, Courses 11 and 12, Mechanics. Lectures and recitations. Peabody's "Thermodynamics of the Steam Engine." Spring, 8:00.

38. **Steam Boilers.** Heating value of fuels, combustion, economical production of steam; application of theory and practice in the design of steam boilers, chimneys and accessories; steam piping and distribution. Prerequisite, Course 30, Mechanical Engineering. Lectures, recitations and drawing, Course 28, Mechanical Engineering. Peabody & Miller's "Steam Boilers."

Three-fifths course. Winter, Mon., Wed., Frid., 10:00.

39. **Heating and Ventilating.** Principles, comparative merits and design of the various systems of ventilating, heating by hot air, hot water, steam and electricity. A careful study of the systems in the different University buildings. Prerequisite, Course 4, Physics. Lectures and recitations. Carpenter's "Heating and Ventilating Buildings." Elective. Time to suit convenience of students.

41. **Prime Movers.** Expansive working of steam, principles of design, construction and operation of steam engines, pumping engines, motive-power machinery, turbines, hydraulic motors and machinery. Prerequisite, Courses 31 and 37, Mechanical Engineering. Lectures, recitations and laboratory, Course 46, Mechanical Engineering. Three-fifths course. Fall, Mon., Wed., Frid., 8:00.

42. **Power Transmission.** Generation, transmission, distribution of electric power; comparison with other systems; economics of location, selection, arrangement, subdivision into units and installation of steam and electric power. Bell's "Electric Power Transmission." Lectures and accompanying Course 48, Mechanical Engineering. Spring, 9:00.

43. **Experimental Mechanics.** The comparison of experimental results and determination of physical laws from observation; theory, calibration and use of slide rule and instruments for the measurement of length, area, volume, weight, power, speed, and pressure; experimental work in kinematics, Statics, dynamics, mechanisms and machinery. Prerequisite, or accompanying Course 2, Mechanics. Carpenter's "Experimental Engineering."

One-third course. Fall, Saturday, 8 to 12.

44. **Power Measurements.** Efficiency tests of simple engines, pumps, dynamos, motors and machinery of power transmission; measurements of power by Prony brake, rope brake, Alden absorption dynamometer, transmitting dynamometer; steam-engine indicator practice and simple valve setting; determination of the quality of steam. Prerequisite or accompanying Course 12, Mechanics.

One-third course. Spring, Saturday, 8 to 12

45. **Testing Materials of Engineering.** Tensile, compressive and transverse tests of wrought iron, cast iron, steel and timber; transverse, compressive and absorption tests of stone and brick; tensile, compressive, specific gravity and absorption tests of cement; also tests for fineness, time of setting and constancy of volume; testing lubricating value of oils, including composition, viscosity, specific gravity, flash and burning tests, cold test and coefficient of friction. Prerequisite or accompanying Course 4, Mechanics.

One-third course. Winter, Saturday, 8 to 12.

46. **Mechanical Engineering Laboratory.** Experimental work in thermodynamics, tests of thermometers, indicators, injectors, calorimeters, steam and oil separators, non-conducting coverings, flow and quality of steam, coal calorimetry, analysis of chimney gases; practice in valve setting, behavior of steam in the cylinder; or such other work as may be assigned. Prerequisite, Course 37, Mechanical Engineering. Two-fifths course, Fall, Saturday, 8 to 12.

47. **Mechanical Engineering Laboratory.** Economy tests of simple and multiple expansion working of the steam engines, condensing and non-condensing; steam boilers, fired with gas and coal; steam heating apparatus; duty trials of steam pumps; efficiency tests of hydraulic motors, fans, blowers, etc.; application of Hirn's analysis to the steam engine; flow of water through pipes and orifices, calibration of water meters.

Two-fifths course. Winter, Saturday, 8 to 12.

48. **Mechanical Engineering Laboratory.** Combined tests of performances of boilers, engines and electrical and other power transmission machinery; testing of plants away from the University when opportunity affords; special research work. Prerequisite 47, Mechanical Engineering.

Two-fifths course. Spring. Time as assigned.

49. **Dynamo-Electrical Machinery.** Principles of design, construction and operation of dynamos, motors and transformers. Prerequisite, Course 9, Physics, and to accompany Course 52, Mechanical Engineering. Jackson's "Electro-Magnetism and the Construction of Dynamos," and "Alternating Currents and Alternating Current Machinery." Fall, 10:00.

50. **Electric Lighting.** Principles of design, construction, installation and operation of electric-lighting systems; electrical distribution for lighting circuits; manufacture, care and use of arc and incandescent lamps. Prerequisite, Course 9, Physics, and to accompany Course 53, Mechanical Engineering. Crocker's "Electric Lighting." Half course. First six weeks, Winter, 10:00.

51. **Electric Railroads.** Principles of design, construction, installation, operation and management of electric railway machinery and electric railroad systems, and distribution for railway circuits. Prerequisite, Course 9, Physics, and to accompany Course 53, Mechanical Engineering. Bell's "Power Distribution for Electric Railroads." Half course. Second six weeks, Winter, 10:00.

52, 53. **Electrical Engineering Laboratory.** Practical management of electrical machinery; coupling generators; calibration of electrical engineering measuring instruments; switch-board tests; determination of efficiencies and characteristics in laboratory and commercial tests of dynamos and motors; comparison methods; investigation of losses; location of faults; testing arc and incandescent lighting circuit. Prerequisites, Course 9, Physics, and Course 44, Mechanical Engineering. To accompany Courses 49, 50 and 51, Mechanical Engineering. Time to be assigned from same. Parham & Shedd's "Shop and Road Testing of Dynamos and Motors." Fall, Winter.

54. **Thesis.** Required of candidates for the degree of Bachelor of Science in Mechanical Engineering. Conference work. Spring, 8:00.

Courses for Graduates.

Hours to be Arranged.

55. **Steam Engineering.** Prerequisites, Courses 37, 38, 41, Mechanical Engineering.

56. **Electrical Engineering.** Prerequisites, Course 9, Physics, and Course 49, Mechanical Engineering.

57. **Mechanical Engineering Design.** Prerequisite, Course 33, and to accompany Course 55, Mechanical Engineering.

58. **Machinery and Mill Work.** Prerequisite, Course 31, Mechanical Engineering. Elective for Seniors. Fall.

59. **Marine Machinery.** Prerequisite, Course 41, Mechanical Engineering. Elective for Seniors. Winter.

60. **Materials of Engineering.** A study of the various materials

used in engineering, the source, manufacture, qualities, costs, etc. Hour to be arranged. Prerequisite, Mechanics 4.

61. **Mechanical Engineering Laboratory.** Prerequisites, Courses 46, 47, 48, and to accompany Course 55, Mechanical Engineering.

62. **Mechanical and Electrical Engineering Laboratory.** To accompany Course 56, Mechanical Engineering.

63. **Mechanical Engineering Practice.** Lectures.

64. **Thesis.** Required of all candidates for the degree of Mechanical Engineer.

Mechanics and Applied Mathematics.

Professor Emory.

1. **Elementary Mechanics.** The principles of rational mechanics with little use of the calculus, and from the physical standpoint. For students pursuing the two-year certificate Mechanical or Electrical course, and those preparing for the work of the artisan, foreman or draughtsman. Prerequisite, Trigonometry.

Winter, 11:00; 2 M.

2. **Kinematics and Dynamics.** The mathematical study of motion and rest, including translation, rotation, vectors, uniform and variable velocities and accelerations, and the geometrical study of the motion of a material point. Dynamics, study of mass, density, moments and centers of mass, and the determination of centers of gravity, momentum, force, and energy. Required of Civil and Mechanical Engineering Juniors. Prerequisite, Calculus.

Spring or Fall, 9:00; 2 M.

3. **Statics and Kinetics.** Concurrent forces, stability of chimneys, towers, earth work, jointed frames, graphical methods and method of sections for determining stresses in structures, friction and constraints, principle of virtual work, theory of attraction and potential, kinetic and potential energy, momentum, impact, work, power, center of gyration, moments of inertia, kinetics of masses and problems in practical selective design. Required of all Civil and Mechanical Engineering Juniors. Prerequisite, Course 2.

Fall or Winter, 9:00; 2 M.

4. **Applied Mechanics.** Strength of Materials. Resistance and elasticity of materials, pipes, cylinders, and riveted joint, cantilever and simple beams, tension and compression, resilience, shear and torsion, strength of timbers, iron, steel, stone, cement, elastic limit factors of safety. Design of simple structures. Required of all Civil and Mechanical Engineering Juniors. Prerequisite, Course 3.

Spring or Winter, 9:00; 2 M

5. **Mechanics of Engineering.** An advanced course in the mechanics of engineering and of engineering materials, with designs

of structures, machines and apparatus, involving their use and selection. For Seniors having preparation, and for graduate students.

6. **Consulting Engineering.** The study of engineering problems, ensemble and in detail, with estimates for installation and economical management. For graduates and Seniors with suitable preparation.

7. **Materials of Construction.** Strength and elasticity; safe loads; changes under different conditions, etc.

8. **Industrial Plants.** The economic study of industrial plants from the engineer's standpoint. Installation and management. For graduates. Half course.

9. **Applied Mathematics.** This course accompanies the Sophomore work in Pure Mathematics in the Engineering course, and is intended to furnish the applications of Mathematics as a basis for the future engineering studies, and particularly as an introduction to the study of theoretical and applied Mechanics, being the mathematical study of motion, and solution of differential equations as occurring in the theoretical Mechanics. Required of Civil Engineering Sophomores. Prerequisite, Analytical Geometry.

Spring, 11:00; 2 M.

10. **Method of Least Squares.** Errors of observation; principle of probability; weight of observations; principle of least squares; probable errors of observations. Optional for Seniors and graduates. Prerequisite, Calculus. Half course. 2 M.

11. **Development and Utilization of Power.** Lecture course. History and development of the pumping engine, railroad engine, naval, steam, hot air, gas oil, wind, and hydraulic engines for all classes of work; modern generator. Open to all students. Required of Civil Engineering Seniors and Mechanical Engineering Juniors, and optional for graduates. Fall, 8:00; 2 M.

12. **Development and Utilization of Power.** Text-book course. Mathematical study of the development of power, the Clausius, Rankine and physical methods of the development of power, measurement of power, testing of apparatus and generators, power-plant installation, and selective design. Complete calculations for power plant to perform some special work, such as water supply, coal handling, mine operation, etc. Prerequisites, Course 3 and Calculus. Required of all Senior Civil and Mining Engineers, and of all Junior Mechanical and Electrical Engineers, and optional for graduates.

Winter, 8:00; 2 M.

13. **Development and Utilization of Power.** Advanced consulting course in power with economical study from the standpoint of the engineer, owner and contractor. Optional for graduates.

Half course. 2 M.

14. **Engineering Calculus.** The application of the simple rules

of the Calculus to engineering formulæ and processes of the Mechanics. Special course for and required of Sophomores in the two years certificate Mechanical and Electrical course. Prerequisite, Analytical Geometry. Half course. 2 M.

15. **Mathematical Theory of Heat.** Optional course for Seniors having preparation and for graduates. Prerequisite, Calculus.

Half course. 2 M.

16. **Mathematical Theory of Electricity.** Mathematical theory of the direct and alternating current, condensers, transformers, motors, etc. Optional for Seniors and graduates. Prerequisite, Calculus. Half course. 2 M.

17. **Hydraulic Motors.** Mathematical study of hydraulic motors. Optional for Seniors and graduates. Prerequisite, Analytical Geometry. Half course. 2 M.

18. **Applied Mathematics.** An advanced course in the applications of the Calculus to Engineering problems, introductory to differential equations. Half course. 2 M.

19. **Differential Equations.** A more extended course than Course 9, above, consisting of the solution of differential equations in general, including the special applications to Mechanics and the discussion of the differential equation in general. Prerequisite, Pure Mathematics, Course 9; or may be taken during the same quarter with Course 9.

Half or full course. Time to be arranged. 2 M.

20. **Higher Mathematics.** A course in general Higher Mathematics, including vector analysis, and hyperbolic functions, etc. Prerequisite, Differential Equations, Course 19, above.

Half or full course. Time to be arranged. 2 M.

THE COLLEGE OF AGRICULTURE.

The Faculty.

THOMAS CLARK ATKESON, Ph.D., Dean, and Professor of Agriculture.

*LEE CLEVELAND CORBETT, M.S., Professor of Horticulture and Forestry.

ANDREW DELMAR HOPKINS, Ph.D., Professor of Economic Entomology.

BERT HOLMES HITE, M.S., Professor of Agricultural Chemistry.

FREDERICK PHILIP RUHL, D.V.S., Professor of Veterinary Science.

WILLIAM EARL RUMSEY, B.S.Agr., Instructor in Botany.

THOMAS ZEPHANIAH ATKESON, B.S.Agr., Fellow in Agriculture.

*Resigned May 1, 1901.

The College of Agriculture.

The well equipped scientific departments of the University, together with their laboratories and scientific apparatus, and the libraries of the Agricultural Experiment Station and University, are at the command of the students in the College of Agriculture. The farm of the Agricultural Experiment Station, together with its gardens, experimental plats, laboratories and collections, are available for students desiring to acquaint themselves with the practical and scientific methods of conducting agricultural pursuits, and to investigate scientific questions relating to the progress and development of agriculture.

The farm is equipped with barns, stables and other buildings,

and presents a variety of soils and conditions existing upon many of the farms of the state. Upon this farm are kept different varieties of farm animals, and the most improved agricultural implements; and facilities are provided for studying the most economic methods of handling live stock and their products, including poultry.

The students who complete their course in this College are expected to be thoroughly up to date and enthusiastic followers of their chosen profession, as well as broadly educated citizens.

Expenses.

To West Virginia students, tuition is free.

To students from other states, tuition is $12.50 per quarter, (twelve weeks).

The matriculation fee, payable by all students upon entering the University, is $5. Unless a student remains out of the University more than three years the matriculation fee is paid but once by each student.

The contingent fee, payable by all students, is $2 per quarter.

Board and room may be obtained in Morgantown at from $3 to $4 per week.

Courses of Study.

The College of Agriculture offers the following courses:

1. The regular four years' course, leading to the degree of Bachelor of Science in Agriculture (B.S.Agr.).

2. The two years course, leading to the degree of Bachelor of Agriculture (B.Agr.).

3. The one year course, which does not lead to any degree, but for the completion of which a certificate is given.

4. A special twelve weeks course, so arranged that students may complete the one-year course in three winter quarters.

5. A special twelve weeks' course in Veterinary Science, Stock Breeding and Feeding will be given during the winter quarter.

6. The Agricultural Home Reading Course, for those who can not attend the University in person, but desire University guidance in carrying on a course of Agricultural study at home.

Condition of Admission.

The requirements for admission are the same as those for admission to the College of Arts and Sciences. See page 43.

DEGREES.

Bachelor of Science in Agriculture.

The degree of Bachelor of Science in Agriculture will be conferred upon any student who satisfies all entrance requirements and

satisfactorily completes forty-two college courses, of which at least ten courses (including a thesis) are in the College of Agriculture. The Dean of the College of Agriculture will act as the student's class officer and adviser, and will have authority to require the completion of the major subject, and also such minor subjects as he may consider necessary or advisable collateral work; but such minor requirements will not exceed six courses. With the exception of these major and minor courses, all work is elective.

For this degree the following forty-two courses are recommended. A course means a course of five class exercises a week for one quarter (twelve weeks), or their equivalent in laboratory or other practical work.

Mathematics,	2 courses;
One Modern Language,	3 courses;
Rhetoric,	2 courses;
English Literature,	1 course;
History,	2 courses;
Psychology,	1 course;
Economics,	1 course;
Sociology,	1 course;
Chemistry,	2 courses;
Physics,	1 course;
Zoölogy,	1 course;
Geology,	1 course;
Agriculture,	1 course;
Entomology,	1 course;
Economic Botany,	1 course;
Horticulture,	3 courses;
Live Stock,	2 courses;
Surveying,	1 course;
Agricultural Chemistry,	1 course;
Rural Economics,	1 course;
Agricultural Science,	2 courses;
Economic Geology,	1 course;
History of Agriculture,	1 course;
Veterinary Science,	2 courses;
Thesis,	1 course.
Military Work, Mechanic Arts, Gymnastics, Drawing and Synoptic or Chapel Lectures,	6 courses.
	42 courses.

Bachelor of Agriculture.

Entrance Requirements.

Candidates for this degree will be admitted to the Freshman Class on the same conditions as candidates for the degree of Bachelor of Science of Agriculture, except that twenty-four courses will be accepted for admission in full standing.

College Requirements.

This degree will be conferred upon any student who satisfies the above entrance requirements, and satisfactorily completes twenty-four college courses, of which at least ten courses, (including a thesis), are in the College of Agriculture. Other requirements are the same as for the degree of Bachelor of Science in Agriculture.

For this degree the following twenty-four courses are recommended:

The Two Year Course.

Rhetoric	1 course;
English Literature,	1 course;
Chemistry,	2 courses;
Physics,	1 course;
Zoölogy,	1 course;
Geology,	1 course;
Agriculture,	1 course;
Economic Entomology,	1 course;
Economic Botany,	1 course;
Horticulture,	3 courses;
Live Stock,	2 courses;
Surveying,	1 course;
Agricultural Chemistry,	1 course;
Rural Economics,	1 course;
Agricultural Science,	1 course;
Bookkeeping,	1 course;
History of Agriculture,	1 course;
Veterinary Science,	2 courses;
Thesis,	1 course;
	24 courses.

Conditional Admission.

Students who have not had opportunity to make the preparation required for admission may enter the Preparatory School at the University, and complete their preparation. If a student lacks only a part of the necessary preparation, he may be admitted conditionally, and complete his preparation while carrying on some of the studies of the College course.

The One Year Course.

This course consists of twelve courses selected from those included in the College of Agriculture. No entrance requirements are made for this course. A certificate indicating the work done will be granted on the completion of this course. It is confidently believed that many young men who are farmers, or expect to become farmers, will find it greatly to their advantage to devote one year to this course, if for any reason they cannot give the time necessary to complete a longer course.

One Quarter Courses.

Two special twelve weeks courses are offered during the winter quarter.

Course One is so arranged that the One Year Course in Agriculture may be completed in three winter quarters. Its object is to provide a winter course for young farmers who may be able to spend only the winter at the University.

Course Two is a winter course in Veterinary Science, Stock Breeding, Stock Feeding, and a general study of animal industry. The purpose is not to make veterinary surgeons, but to enable students to properly diagnose the principal diseases among farm animals, to treat common accidents and to use preventive measures.

No entrance requirements are made for these courses.

DEPARTMENTS OF INSTRUCTION.

Only the technical courses are described here. For the other courses to be taken by students in the College of Agriculture, see the courses announced in the College of Arts and Sciences.

Agriculture.

Professor Atkeson.

1. **Agriculture.** First principles of agriculture; origin, cultivation, drainage, and classification of soils; indications of fertility; improvement of soils and their physical properties; principles of manures and manuring; production and handling of farm crops; preparation of land for the seed and subsequent care of the plant; pastures, meadows and forage, and a general study of farm machinery and buildings. Bailey's "Principles of Agriculture."

Fall and Winter, 10:00; A.

2. **Stock Breeding.** What is meant by breeding; how to attain the ideal; the principles of heredity; atavism, variation, selection, correlation, in-and-in breeding, controlling sex; parental, mental, environment, and climatic influences; history, characteristics, purposes and uses of the different breeds of domestic animals. Miles' "Stock-Breeding;" Shaw's "Study of Breeds." Winter, 11:00; A.

3. **Stock Feeding.** Laws of animal nutrition; feeding stuffs; feeding farm animals; feeding for milk, muscle and fat; sources of food; how the animal uses food; preparation of food; study of rations and feeding standards; care and management of live stock, including poultry. Henry's "Feeds and Feeding."

Winter, 8:00; A.

4. **Rural Economics.** Lectures and recitations. Farming as a business; method of keeping farm accounts; a brief study of the laws that directly concern the farmer; how the farmer is affected by the general industrial and social conditions which determine and modify an intelligent prosecution of his business; the mutual relations of agriculture and other industries; value and prices, with especial reference to land and agricultural products; system of land

tenure; general principles of co-operation; co-operative distribution, production, banking and insurance; farmers' organizations, their objects, aims and purposes; farmers' institutes, and best methods of conducting them; a thorough study and investigation of every question evolved in practical and successful agriculture. Haigh's "Manual of Farm Law;" Atkeson's "Bookkeeping for Farmers;" Myrick's "How to Co-operate." Spring, 10:00; A.

5. **History of Agriculture**...Lectures and recitations. A general history of Agriculture, beginning with the most ancient times, tracing the history of agriculture and agricultural methods through all ages to the present, with a special study of the present practices and methods of competing with foreign countries. Hoskyn's "Inquiry into the History of Agriculture;" De Candolle's "Origin of Cultivated Plants;" Flint's "One Hundred Years of Progress;" Mitchell's "Wet Days at Edgewood." Spring 8:00; A.

6. **History of Commerce.** Lectures and recitations. Methods of exchange in ancient times; shipping of the ancients; fairs and markets; results of maritime discoveries; changing of commercial routes; international treaties affecting commerce; scientific and industrial discoveries affecting commerce; trade restriction; consuls; modern commerce; boards of trade; stock and produce exchanges; stock companies; corporations; modern transportation; freight companies; express companies; telegraph and telephone companies,warehouses, duties, insurance; modern methods of preparing and shipping articles of merchandise; circulation of commodities between cities and countries; jobbing and commission business; trade statistics; dependence of manufacturers upon producers of raw material; nomenclature of commerce. Text-books, Tilden's "Commercial Geography;" Chisholm's "Commercial Geography." Winter, 9:00; A.

7. **Agricultural Science.** Lectures and recitations. General relation of soil and air to plants. The atmosphere as a source of plant food; relations of water to the soil; movements of water in the soil; soils as chemical agents; manures and manuring; chemical fertilizers; potassic manures; magnesium, sodium and lime compounds. Aikman's "Manures and Manuring." Spring 8:00; A.

8. **Advanced Agricultural Science.** Farmyard manures; green manuring; humus and vegetable moulds; composts and modes of applying manures; theory of the rotation of crops; irrigation; growth of crops; maintenace of meadows and pasture lands, and a general discussion of the methods of extensive and intensive farming. Storer's "Agriculture." Fall, 9:00; A.

9. **Farm Equipment.** Selecting, planting and equipping farms; planing and erecting farm buildings and fences; building roads;

farm vehicles and machinery; farm implements and the application of different kinds of power for farm purposes.

Half course. Fall, 11:00; A.

10. Poultry Industry. Lectures and recitations. Study of breeds of poultry. Discussion of equipment, including houses, incubators, and numerous mechanical appliances necessary to the business. Artificial and natural incubation. Breeding, feeding, and care of poultry. Poultry farming as a business. Text-books, Stoddard's "The New Egg Farm;" Felch's "Poultry Culture."

Half Course. Fall, 11:00; A.

Horticulture and Forestry.

Professor ————.

The instruction offered in the department of Horticulture is made thoroughly practical, and especial stress is laid upon those branches which are particularly suited to the conditions of West Virginia.

1. Plant Propagation. The instruction offered under this heading is for the purpose of preparing the student for the courses in Fruit Culture and Vegetable Gardening by explaining the theory of plant life, the essentials for its existence and the means at man's disposal for providing these conditions. The topics considered are germination, multiplication by cutting, layers, stolons, buds, grafts, etc., the processes of reproduction, such as pollination and its effects upon plant structures; value of artificial pollination and how accomplished. Fall, 8:00; A.

Heretofore this work has been made a part of the regular course in Fruit Culture, but it is now deemed best to amplify it and make it a full course, thus allowing more time to both Plant Propagation and to Fruit Culture.

2. Fruit Culture. This course is intended to familiarize the student with all classes of fruits of the north temperate zone; their propagation, culture and pruning, treatment to prevent injuries from insects and diseases. The classroom exercises are enforced by actual practice in budding, pruning and planting trees, together with practical work in the preparation and application of insecticides and fungicides. A knowledge of the elements of Botany is almost a necessity, in order that the student make progress in this course. The instruction is mainly given through lectures, from which the students are required to take notes. The notes so taken are considered a part of the regular work of the course, and the fullness, neatness and accuracy with which this work is done is considered in making up the final grade of the student. The lectures are, so far as the equipment of the institution will permit, supplemented by practical exercises. Winter, 8:00; A.

3. **Vegetable Gardening.** Greenhouse construction and management. Lectures and recitations on the origin, propagation, cultivation, insect enemies and fungus diseases of garden vegetables, together with practice in the planting and cultivation of these vegetables in the garden; the laying out of home grounds, and the construction and management of greenhouses. The requirements for this course are the same as for Course 1, and the class exercises are conducted in like manner. Spring, 8:00; A.

4. **Plant Breeding.** This course is designed to meet the requirements of those who wish to prepare themselves to become florists, nurserymen or practical fruit growers, as well as those who expect to teach. A study of the methods of plant breeding, evolution and heredity, as applied to cultivated plants, are its chief features.

Prerequisites: Courses 1 and 2, 3, 4, and 5 in Botany, together with Courses 1 and 2, in Horticulture. Fall, 11:00; A.

5. **Forestry.** This course is devoted to the consideration of the forestry problems presented in the United States.

Veterinary Science.

Professor Ruhl.

The object of this department is to give students such instruction in Veterinary Science as will enable them to diagnose and treat intelligently the common diseases of domestic animals.

1. **Anatomy and Operative Surgery.** This course will include lectures, recitations and clinical instruction illustrated by charts and various appliances. Dissections and actual operations by advanced students. Chaureau's "Anatomy;" Williams "Operative Surgery." Winter, 9:00 A. M.; A.

2. **Theory and Practice.** Instruction will consist mainly of lectures upon the classification, causes, nature, symptoms, diagnosis, prognosis, treatment and termination of the different diseases. Williams' "Principles and Practice of Veterinary Medicine." Steele's "Cattle Practice." Winter, 10:00 A. M.; A.

3. **Clinical Instruction.** This course is arranged especially for advanced students, who have had Courses 1 and 2, and will consist mainly of practical work, under direction. An effort will be made to supply a variety of material. Cases will be assigned and students will be required to report the same. Patient visiting will also be required. Examination for soundness, detection and location of lameness, and physical diagnosis. Different methods of shoeing to relieve lameness, and care of the feet.

Winter. Hour arranged to accommodate class.

Economic Entomology.

Prof. Hopkins and Mr. Rumsey.

1. **Economic Entomology.** This course will be conducted with a view to stimulating an interest in the study of insect life, and giving instruction along lines especially suited to the needs of the agricultural student. Text-books and laboratory demonstrations will be used to give such elementary instruction in economic and systematic Entomology as will give the student a general knowledge of the science, and instruction in the application of this knowledge will be given by means of practical field and research work.

Spring, 8:00; A.

Economic Botany.

Mr. Rumsey.

1. **Economic Botany.** (a) Phanerogams. Practical and comparative studies of seeds, seedlings and the organs of mature plants. The growth, dissemination, duration and eradication of weeds. Herbarium work. (b) Cryptograms. An outline study of ferns, mosses and fungi.

This course is designed especially for agricultural students, but will also be of value to all those interested in the subject of Botany, for the practical work of the laboratory will bring the student in closer touch with nature, and teach him to see and more fully understand the valuable and interesting phases of the plant world. Prerequisites, Elementary Botany as given in the Preparatory Department of the University, or its equivalent. Spring, 11:00; A.

Agricultural Chemistry.

Professor Hite.

1. **Agricultural Chemistry.** A course of lectures on the application of chemical principles to farm economy. The relation of Chemistry to Agriculture; relation of the plant to soil and air; sources of plant food; osmosis and osmotic pressure; mechanism of plant nutrition; germination and elaboration of plant tissue. Soils; their origin, formation, composition, classification, deterioration, and improvement. Nitrification of soils. Prerequisite, general elementary Chemistry. Reference book, Johnson's "Agricultural Chemistry." Spring, 10:00; A.

2. **Agricultural Chemical Analysis.** This course includes the analysis of farm products, soils, ashes, fertilizers, mineral and drinking waters, etc. Prerequisites, Qualitative and Quantitative Analysis and Agricultural Chemistry 1. Laboratory guide, Wiley's "Principles and Practice of Agricultural Chemical Analysis."

Fall, Winter, Spring, 2:00; A.

Theses.

A thesis upon a subject in Agriculture or some closely allied branch of study will be required of each student who graduates. The subject must be selected in conference with the Dean of the College of Agriculture, and will involve original investigation of a character intended to bring out the full abilities of the student.

Agricultural Society.

An Agricultural Society has been organized, which meets weekly, for the discussion of current and scientific topics in Agriculture and related subjects. All agricultural students are expected to join this society and perform such work as its rules require.

Library.

The Agricultural Experiment Station Library, composed of thousands of books on agricultural subjects, and much of the current agricultural literature, and the regular University Library, are placed at the service of the students in the College of Agriculture.

Agricultural Home Reading Course.

Since it is impossible for a great majority of the farmers of the state to attend the College of Agriculture, the Faculty has determined to do all it can to take the College to the farmer, by offering a systematic course of Home Reading in Agriculture. It is not expected that this course will in any sense take the place of a regular course at the College, but it is expected that every one who faithfully pursues this carefully prepared course upon technical agriculture, horticulture, stock-growing, rural economy, and kindred subjects, will be vastly benefited thereby.

This course is open to all, there being no requirements as to age, sex, or previous preparation, and no examination is required for admission.

No fee is charged for registering students in this course.

The course may be begun at any time, and carried on as rapidly or as slowly as may be desirable. The subjects may be taken up in any order desired, and any part of the course taken without the rest. The whole course is divided into four divisions, but a regular course may consist of any two of the four divisions, or the student may elect any ten of the twenty subjects given.

Certificates.

Any student who has completed a subject will, upon notifying the Dean, receive an examination paper on that subject, to which written answers are to be returned, accompanied with a statement

upon honor that the answers are the unaided work of the person sending them. These answers will be graded, and any one receiving a grade of 75 per cent. or more in the studies of any two divisions will receive a suitable certificate signed by the President of the Board of Regents, President of the University and the Dean of the College. For this certificate a charge of one dollar will be made, which is only sufficient to cover the actual cost of material and engraving.

Local Circles.

Individuals may take the course by themselves, wholly independent of anyone else. Much mutual benefit will be derived, however, by the formation of local reading circles of from five to twenty members, which may meet at regular times for study and discussion, and it is urged that this be done whenever possible.

It is suggested, also, that farmers' organizations—granges, farmers' clubs, etc.—may add to the interest and profit of their meetings by taking up the course or such portions of it as may be of special interest to them.

Only one set of books need be purchased for each reading circle, grange or club, although it is believed that a greater interest in the work will be secured by having at least one book for each member.

One book at a time may be purchased by the individual student or the reading circle, if circumstances make this desirable.

The text-books selected for this course are standard works, fully illustrated and neatly bound, revised and brought up to date. They contain in all cases a plain, practical presentation of the scientific principles underlying the best practices in the different departments of farming, stock-raising and gardening. The scientific terms used are fully explained.

All students are expected to ask for assistance whenever difficult problems are encountered or any passages are found in the books that are not perfectly clear.

Illustrative Material.

Special attention is called to the fact that the course of study here laid down is a study of the materials and processes going on upon the farm, and that the text-book should be used as an aid to direct personal observation and study of the things themselves and not as a substitute for it. In this respect an agricultural course has advantages over many others, and it is hoped that no one will forego these advantages and confine his work to the text-book alone.

Books at Reduced Rates.

Arrangements have been made with The Orange Judd Co., 52-54 Lafayette Place, New York, by which the books required will be fur-

nished to students of this course only at the prices named, which are a great reduction from regular retail rates. These prices include postage and are payable strictly in advance.

Division I.—Crop Production.	Postpaid.
Plant Life on the Farm—Masters	$ .75
Soils and Crops—Morrow & Hunt	.75
Manures and Manuring—Aikman	2.25
The Soil—King	.57
Tile Drainage—Chamberlain	.27

Division II.—Live Stock Production.	
Feeds and Feeding—Henry	1.60
Study of Breeds—Shaw	1.00
Swine Husbandry—Coburn	1.17
American Dairying—Gurler	.75
Poultry Culture—Felch	1.13

Division **III.—Horticulture and Floriculture.**	
The Propagation of Plants—Fuller	.99
The Fruit Garden—Barry	1.32
Insects and Insecticides—Weed	1.00
Practical Floriculture—Henderson	.99
Spraying—Lodeman	.75

Division IV.—Rural Economy.	Postpaid.
Bookkeeping for Farmers—Atkeson	$ .15
Farm Law—Bennett	.50
How to Co-operate—Myrick	.50
The Farmstead—Roberts	1.00
Chemistry of Cookery—Williams	1.13

Directions for Ordering Books.

Orders for books should be addressed directly to The Orange Judd Co., and should in all cases be accompanied by a postal or express money order or draft, payable to the above firm, for the full amount of the order.

All communications in regard to the Agricultural Home Reading Course should be addressed to the Dean of the College of Agriculture.

THE WEST VIRGINIA AGRICULTURAL EXPERIMENT STATION.

BOARD OF REGENTS.

The Regents of the West Virginia University.

Station Committee.

George C. Sturgiss, James L. Hamill, James F. Brown.

Station Staff.

J. H. STEWART, A.M., Director and Agriculturist.

A. D. HOPKINS, Ph.D., Vice-Director and Entomologist.

B. H. HITE, M.S., Chemist.

L. C. CORBETT, M.S., Horticulturist.

W. E. RUMSEY, B.S.Agr., Assistant Entomologist.

HORACE ATWOOD, M.S.Agr., Assistant Agriculturist.

C. D. HOWARD, B.S., Assistant Chemist.

E. C. FRAME, Clerk and Stenographer.

M. A. STEWART, Librarian.

The Experiment Station is a distinct and separate department of the University, and was established by the Board of Regents in 1887, by authority of an Act of Congress, known as the Hatch Act, which was passed on the 2d day of March of that year. The funds for carrying on the operations of the Station, with the exception of its earnings, are derived wholly from the general government. The

aforesaid Act in section 2 fully states the object and purposes of the Experiment Station as follows:

"That it shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches and experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states and territories."

Bulletins and annual reports setting out results of experiments and investigations conducted at the Station are published for gratuitous distribution, and will be mailed, free, to any citizen of the state applying for them.

The Station invites correspondence, suggestions, and advice from farmers and others interested in this work, and all such, with reference to bulletins, experiments, or any matter relating to agriculture, will be welcomed and will receive careful and prompt attention. Correspondence should be aduressed to the Director of the Station.

THE COLLEGE OF LAW.

The Faculty.

OKEY JOHNSON, A.M., LL.B., Dean, and Professor of Constitutional and International Law, and the Law of Corporations.

ST. GEORGE TUCKER BROOKE, LL.D., Professor of Common and Statute Law.

WILLIAM P. WILLEY, A.M., Professor of Equity Jurisprudence and Comercial Law.

Courses Offered in the College of Law.

The College of Law offers two courses:

1. The four years' course leading to the degree of Bachelor of Laws. The first two of the four years of this course are devoted to such general culture studies as are most essential to a lawyer; the last two years of the course are exclusively devoted to professional law work.

2. The two years course, which leads to a Diploma of Graduation in Law. A student who completes this course will receive a Diploma, which, upon presentation, will admit him to practice law in any court in West Virginia. The subjects taught in this course are the same as those taught in the Junior and Senior years in the four years course.

Entrance Subjects and Requirements.

The Four Years Degree Course.

For meeting the requirements for admission, candidates are offered a choice of seventy-seven preparatory courses in thirty subjects. A "course" represents the amount of work done by a class meeting five times a week for one quarter (twelve weeks). The entrance subjects are all reduced to the unit of a course, and placed on exact equality. Thirty-nine courses will be accepted for admission to the four years degree course in full standing, and these may

be selected by the candidate from among the following seventy-seven courses:

1.	English Grammar,	2 courses;
2.	English Composition and Rhetoric,	5 courses;
3.	English Literature,	2 courses;
4.	Latin,	9 courses;
5.	Greek,	6 courses;
6.	French,	6 courses;
7.	German,	9 courses;
8.	Greek History,	1 course;
9.	Roman History,	1 course;
10.	Mediaeval History,	1 course;
11.	Modern History,	1 course;
12.	English History,	1 course;
13.	American History,	1 course;
14.	Civil Government,	1 course;
15.	Arithmetic,	1 course;
16.	Elementary Algebra,	3 courses;
17.	Plane Geometry,	2 courses;
18.	Plane Trigonometry,	1 course;
19.	Advanced Algebra,	1 course;
20.	Solid Geometry,	1 course;
21.	Botany,	2 courses;
22.	Physics	2 courses;
23.	Chemistry,	3 courses;
24.	Zoology,	3 courses;
25.	Physical Geography,	1 course;
26.	Physiology,	1 course;
27.	Astronomy,	1 course;
28.	Drawing,	3 courses;
29.	Mechanic Arts,	3 courses;
30.	Military Science,	3 courses;

Not more than one course in Botany, Physics, Chemistry, or Zoology will be accepted for admission unless the work has been accompanied by laboratory or field work.

Certificates from accredited schools will be accepted in place of entrance examinations.

The Two Years Certificate Course.

Twenty-four of the above preparatory courses will be accepted for admission to the two years Diploma course.

Special Students.

Persons who are at least twenty-one years of age, and who are not candidates for a degree or for a certificate, but who desire to

prepare for the examination for admission to the bar, will be admitted to the College of Law as special students.

Any special student who completes the whole Law Course will receive a certificate of that fact signed by the Law faculty, and any special student who requests it will receive from the Law faculty a certificate showing the time he has spent in the College of Law and the subjects completed.

Conditional Admission.

Students who have not had opportunity to make the preparation required for admission may enter the Preparatory School at the University and complete their preparation. If a student lacks only a part of the necessary preparation, he may be admitted conditionally, and complete his preparation while carrying on some of the studies of the Freshman year.

Advanced Standing.

A candidate for advanced standing may receive credit for so many of the courses required in the Junior year as he may be able to pass satisfactorily upon examination before the Faculty of the Law College; but no credit for advanced standing will be given for any Senior course. No diploma will be granted to any student, or degree conferred upon him, unless he has been in actual attendance upon the lectures during at least three quarters. Examinations for advanced standing will be held by the Faculty of the Law College on the third, fourth and fifth days of each Fall Quarter.

DEGREES.

Bachelor of Laws.

The degree of Bachelor of Laws will be conferred upon any student who satisfies all entrance requirements, and satisfactorily completes twenty-one college courses in general culture, and twenty-one courses in law. The twenty-one courses in law, (of which one course must be a thesis), constitute the regular two years law course. Graduates of West Virginia University or other colleges or universities of recognized standing, and students who have completed two full years of a college course at a recognized college, are not required to take the twenty-one college courses in general culture, but are admitted immediately to the Junior class, and may complete the course and receive the degree of Bachelor of Laws in two years.

Master of Laws.

The degree of Master of Laws will be conferred on any graduate of this College of Law who has previously received the degree

of Bachelor of Laws, who pursues the study of law in this College for one year after graduation, and who completes to the satisfaction of the Faculty of the College of Law such a course of study as may be required, and who at the end of the year presents to the Faculty a satisfactory thesis on some legal subject to be selected by the student with the approval of the Law Faculty; and the privilege thus extended to graduates of this College of Law is also extended to graduates of other law schools of equal grade.

This course will consist mainly of original investigation, under the direction of the Faculty of the College of Law. Most of the work will be done in the Law Library, the "lawyer's laboratory." Legal questions will be given for solution, and cases to be analyzed. Cases without syllabi will be given to the student, who will be required to make a complete report of each case,—the questions involved, how they arose, the pleadings, how the case was decided in the inferior court, how it was decided in the Appellate Court on appeal or writ of error, and the grounds on which the decision was made. The syllabus of the case will then be required, careful distinction being made between the decision and the mere *obiter dictum* of the judge who announced the decision.

Credit Towards the Degree of Bachelor of Arts.

The courses in Constitutional Law, International Law and Blackstone may be counted towards the degree of Bachelor of Arts.

Courses of Instruction.

There is no prescribed order in which a student in the four years degree course must take the general culture courses above indicated, which are required in the Freshman and Sophomore years. Each student will arrange with his class officer at the beginning of each quarter as to the courses he will take during that quarter. The class officer will use his judgment in the assignment of studies. It is his duty to see that each student under his charge takes work which will be most beneficial.

The studies of the Junior and Senior years constitute the professional course in Law. These studies are all required, and must be taken in a specified order, unless special permission is obtained to vary that order. Students who are taking the two years Diploma course have the same studies as Juniors and Seniors in the four years degree course.

The professional course offered by the College of Law is the full, complete and comprehensive course of the modern law school, which will prepare students for the practice of Law in any part of the United States.

The aim of the College of Law is to make not merely theoret-

ical, but practical lawyers, who will go from the lecture-room to the bar thoroughly equipped for the active duties of the profession. It aims, moreover, while making thorough lawyers, to give the student a correct conception of the scope and character of the profession, and to start him in life with high ideals of professional ethics and dignity.

The methods of instruction consist of lectures, references to illustrative cases, examinations from approved text-books, quizzes on lectures, the drawing of the various legal papers requisite in the ordinary practice of the law, and practice in moot courts. There are oral examinations daily on the subjects of the lectures and the text-books used, and comprehensive written examinations on each topic or branch of law as completed.

The professional part of the regular Law Course is designed to occupy the student two full years, and is divided between the College quarters in such a manner that students may with advantage enter at the beginning of any quarter and complete and obtain credit for the branches taught during that quarter. The following schedule shows the division of the quarters and subjects studied during the Junior and Senior years:

Professional Courses in Law.

Junior Year.

Fall Quarter.

Blackstone. Professor Brooke. Full course, 8.00
Contracts. Professor Willey. Full course, 9.00
Agency. Professor Johnson. Half course. Last six weeks, 10.00
Criminal Law. Professor Johnson. Two-thirds course. First eight weeks, 11.00
Parliamentary Law. Professor Johnson. One-third course. First four weeks, 9.00

Winter Quarter.

Blackstone. Professor Brooke. Full course, 8.00
Negotiable Paper. Professor Willey. One-third course. First four weeks, 9:00.
Suretyship and Guaranty. Professor Willey. One-third course. Second four weeks, 9.00
Bailments. Professor Willey. One-third course. Last four weeks, 9.00
Criminal Procedure. Professor Johnson. Full course, 11.00

Spring Quarter.

Blackstone. Professor Brooke. Full course, 8.00
International Law. Professor Johnson. Full course, 9.00
***Engineering Jurisprudence.** Professor Johnson. Half course. First six weks, 10.00
Civil and Criminal Evidence. Professor Willey. Full course, 11.00

Senior Year.

Fall Quarter.

Corporations. Professor Johnson. Full course, 9.00
Common Law Pleading and Practice. Professor Brooke. Full course, 10.00
Equity and Equity Pleading. Professor Willey. Full course, 11.00

Winter Quarter.

Constitutional Law. Professor Johnson. Full course, 9.00
Real Property. Professor Brooke. Full course, 10.00
Equity and Equity Pleading. Professor Willey... Full course, 11.00
Court Practice. Professors Johnson, Brooke, Willey. Two-thirds course

Spring Quarter.

Sales. Professor Willey. Half course. First six weeks, 9.00
Partnership. Professor Willey. Half course. Last six weeks, 9.00
Torts. Professor Brooke. Full course, 10.00
Young Lawyer in Practice. Professor Johnson. Half course. Last six weeks, 11.00
Damages. Professor Johnson. Half course. First six weeks, 11.00
Court Practice. Professors Johnson, Brooke, Willey. Two-thirds course.
Thesis. One course

Text Books.

The text-books used in the Law College are carefully selected and are such as will be useful to the student throughout his professional career. They are all kept at the University, and sold to the students at a discount from the regular prices. They are as follows:

Blackstone's Commentaries.
Clark on Contracts.
Elliott on Insurance.
Clark on Criminal Law.
Clark on Criminal Procedure.

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*Elective. This course is not required of candidates for a law degree, and is inserted here only to show the time at which it is given.

Norton on Negotiable Paper.
Hale on Bailments.
Huffcut on Agency.
Hale on Damages.
Cooley's Principles of the Constitution.
Shipman's Common Law Pleading and Equity Pleading.
Brooke's Notes on Pleading and Practice in West Virginia.
Clark on Corporations.
Fetter's Equity.
Williams' Real Property.
Glenn's International Law.
Pollock on Torts.
Underhill's Evidence.
Tiffany on Sales.
George on Partnership.
Roberts' Rules of Order.

Expenses.

To West Virginia students tuition is free.

To students from other states tuition is $8 per quarter (twelve weeks).

The matriculation fee, payable by all students upon entering the University, is $5. Unless a student remains out of the University more than three years, the matriculation fee is paid but once by each student.

The contingent fee, payable by all students, is $2 per quarter.

Board and room may be obtained in Morgantown at from $3 to $4 per week.

The text-books absolutely essential to the student in pursuing the prescribed course of study are not numerous or costly, and are such as will be useful to him throughout his professional career.

Examinations for Admission to the Bar.

It is made the duty of the Law Faculty by the laws of the state to examine all applicants for admission to practice law. These examinations are held at the University, on the first Wednesday, Thursday and Friday in February, May, August and November.

The only requirement for admission to these examinations is that the applicant shall have studied law for two years either in private or at some law school. The examination covers the branches taught in the Junior and Senior years (the prescribed professional course) in this Law College.

Law Library.

Heretofore the great want of the Law College has been a proper Library, a suitable place for it, and a Librarian. That want has

been in some measure supplied. The Law College has now a good Library room, with stack-room attached, which contains over sixteen hundred volumes of well selected books. It contains the United States, Supreme Court Reports, also Massachusetts, New York, Pennsylvania, Virgina and West Virginia Reports, with many other Reports, and a good selection of text-boks, and is under the charge of a Librarian. The Law Library, small as it is, is much appreciated. It will be further enlarged.

Advantages of a University Law Course.

The increasing favor with which law schools are regarded is due to the higher standard of preparation necessary to enable a lawyer to attain eminence in his profession, as compared with a past age. The lawyer who now aspires to occupy a high position at the bar must be thoroughly equipped. The competition he must meet demands a broad culture, scholarly discipline and a thorough mastery of the principles of law. Law schools have largely contributed to the elevation of the standard. They are now regarded as essential in the legal profession as the medical college and theological seminary are to the medical and clerical professions.

The almost universal experience is that when a young man sits down in a law office to prepare for the bar he becomes impatient to engage in the active business of his profession with which he is surrounded. He makes haste to finish rather than master the course. The active practitioner under whom he is reading is engrossed with the cares of his business and gives him but little attention. He reads in a superficial manner enough branches to enable him to secure a license to practice, believing that he will have time enough when he is admitted to the bar to finish his studies. But the groundwork of a successful professional career is forever neglected, as a rule, constantly proving the old maxim that "he who is not a good lawyer when he goes to the bar will seldom be a good one afterward."

The university course brings the student in constant association with those who are making mental discipline a business; it surrounds him with influences that are elevating and refining; produces habits of application which he will seldom acquire in any other place, and without which he will never make a lawyer.

The advantage of access to a large and well-selected law and miscellaneous library, and the valuable drill of the Literary Societies and Moot Courts are of no small consideration.

Moot Courts.

However familiar the student may be with the principles and theories of law in all its branches, he will be more or less awkward

and confused when he goes to the bar and attempts for the first time to make a practical application of legal remedies, unless he has been previously drilled on this behalf. The Moot Court supplies, as well as anything other than a judicial tribunal can do, the drill and discipline necessary to prepare the student for the trial tables. In these courts he is taught to apply legal remedies according to the common law and chancery systems of practice; to bring suits; draw papers, pleadings, briefs, etc., and take the various steps incident to bringing a cause to trial, and then to try it according to the rules of evidence, including the argument, charge, verdict, motion in arrest of judgment, writ of error, etc. The Moot Court is organized in strict conformity to the practice of the regular courts in all its details. The students themselves act respectively as counsel, jurors, witnesses and officers of the court, thus learning by actual doing all the forms of court practice; while a professor sits as judge, with the double aim of illustrating the legal principle involved and explaining the rules of practice. The grammatical accuracy, rhetoric, elocution and courtesy of deportment of students also come under review of the professor, and the young men are thus fitted to appear and conduct themselves at the bar as gentlemen and scholars as well as lawyers. The system of Moot Courts is thorough.

Each of the professors holds court once a week, in his room, for the trial of law cases.

There is a Supreme Court of Appeals, composed of all three professors, the Dean sitting as president of the court, to which all appeals from decrees, and writs of error to judgments rendered in the three several Circuit Courts may be taken. The system works admirably, and gives the student the practice in all the courts, following his case from the Circuit Court, where it is brought, to the Supreme Court of Appeals, which determines finally all cases. Trials are occasionally held in Commencement Hall, and are open to the public.

Eminent Opinions.

The time has gone by when an eminent lawyer, in full practice, can take a class of students into his office and become their teacher. Once that was practicable, but now it is not. The consequence is that law schools are now a necessity.—The Late Chief Justice Waite.

There is little, if any, dispute now as to the relative merit of education by means of law schools and that to be got by mere practical training or apprenticeship as an attorney's clerk. Without disparagement of mere practical advantages, the verdict of the best informed is in favor of the best schools.—Report of the Committee

on Legal Education to the American Bar Association, August 21, 1879, at Saratoga, New York.

Professor Bryce, in "The American Commonwealth," attributes the superior attainments of the members of the legal profession in the United States "to the extraordinary excellence of many of the law schools."

Mr. Herron, of Dublin, in his work on the history of Jurisprudence, declares that in the matter of legal reform, and in that of legal authorship, the United States have surpassed England, and he attributes the fact "to the superior legal education which the American lawyers receive and to the schools of law established throughout the United States."

SCHOOL OF MUSIC.

Faculty.

CHARLES ALFRED ELLENBERGER, Director, and Professor of Music.

RUSSELL McMURPHY, Instructor on the Piano.

GRACE MARTIN, B.M., Instructor on the Piano.

THEODORE CHRISTIAN RUDE, Instructor on Violin, Viola and other Stringed Instruments.

THOMAS GETZANDANER HILL, Instructor on Brass and Wood Wind Instruments.

———— ————, Instructor in Voice.

Origin and Purpose.

The School of Music is an integral part of the University, having been organized as such in 1897, and owes its inception to the need, long felt by the patrons and friends of the University, of a well-equipped department of Music, in connection with the other departments, where young men and women of the state might have the opportunity of securing thorough musical training with other necessary educational advantages, and at reasonable cost. It is also a recognized fact that the æsthetic influence of a good School of Music upon the student body in general is most beneficial.

Courses of Study.

The instruction in the School of Music is based upon the most approved and practical modern methods in Piano-forte and Organ playing, Voice Culture, Violin, Viola, Violincello, Mandolin, Guitar, Banjo, Cornet, Clarionet, and other Brass, and Reed, Band and Orchestral instruments, Harmony, Theory, Musical History, Sight

Singing, and kindred branches. A distinguishing feature of this department is the cultivation of those allied branches which, in connection with the special courses, go to make the student not merely a trained executant, but a broad and liberal musician in the best sense of the word.

Special Advantages.

Many advantages accrue to the student in a School of Music connected with a University. Opportunities are afforded for studying in the various other departments, thus securing to the music student a symmetrical education, literary and scientific, as well as musical. On the other hand, the existence of a department of Music affords advantages in musical training to the students in all the other departments.

Instruction is furnished free of charge in a number of branches, while in others the tuition fees are merely nominal. The exceptionally low tuition rates which prevail here, are made possible by means of state aid.

Credit for Music on College Courses.

Credit towards the degree of Bachelor of Arts will be given for the courses in the Science and History of Music.

Building and Equipment.

The School of Music has been removed to the new wing of the University building, which has been fitted up especially for its needs. The rooms both for teaching and practice purposes are large, with high ceilings, sound-proof partition walls, oak flooring, electric light, and steam heat. There is also a comfortable reception-room, where students may rest while waiting for their lesson periods. Surrounding the building upon all sides the scenery is superb,—campus, romantic ravine, and winding river, with steep, wooded banks. The equipment of pianos and claviers is of the best, and all the instruments are new. The large and commodious Chapel, seating 1500 people, contains a fine, new Concert Grand Piano, and a magnificent new 3-manual Pipe Organ—tubular pneumatic—built upon the universal wind chest system, and containing 76 stops and mechanical accessories. Excellent opportunities are thus afforded for recital and concert work.

Time Required to Complete a Grade

Attention is called to the fact that the time required to complete a grade depends upon the student's talent, age, previous instruction, and amount of daily practice. With good health and thoroughly systematized work, a grade (three courses) should be completed in a year.

Requirements for Diploma and Certificate.

A course in sight reading, memorizing, and technical work is followed through all the courses. A knowledge of Harmony, Theory and Musical History is essential to an intelligent interpretation of Music. Elementary study in these three branches is required for completion of the third grade. Students completing the fourth grade will be entitled to a certificate. A candidate for a diploma must complete the required courses of study of some instrument or Voice, together with two courses in Harmony, passing satisfactory examinations thereon, and must perform in public during the last year of study an entire concert program to test his or her ability to interpret correctly the different schools of composition. Candidates for a diploma in Voice Culture, in addition to the above, must satisfactorily complete the first two grades in the Piano course, and at least two courses in German and Italian.

Candidates for the fourth grade certificate must pass a satisfactory examination in Sight Reading, Memorizing, Technique, Musical History, and have taken at least one course in Harmony.

Recitals.

A very necessary part of a student's education is the development of confidence, which can only be acquired by appearing occasionally before an audience. To meet this need, Students' Recitals have been established, some of which are open to the public, others only to the intimate friends of the participants. There are also Faculty Recitals and classroom Recitals, at which different styles of compositions are analyzed and rendered, tracing the historic development from the Classic to the Romantic period.

Tuition.

Students whose work is all in the School of Music are not required to pay the usual University fees, but are entitled to all the privileges of the other University students, including the numerous public lectures, which are given frequently by eminent specialists.

The fees vary, according to the teacher, and the kind of lessons preferred,—private or in classes. In most of the departments the private lessons extend over a period of 30 minutes. The class lessons extend over a period of 60 minutes, and the number in each class is limited to three, except in Harmony and Theory and Musical History. Attention is called to the fact that the University quarter averages more than eleven weeks, and is therefore materially longer than the usual music term of ten weeks as conducted by many schools.

Tuition per quarter:

Piano—two lessons per week (private) of 30 minutes each....$16.00
Piano—two lessons per week (class) of 60 minutes each..... 12.00
Piano—two lessons per week (private) of 30 minutes each.... 12.00
Piano—two lessons per week (class) of 60 minutes each..... 10.00
Voice Culture—two lessons per week (private) of 30 minutes each..... 16.00
Voice Culture—two lessons per week (class) of 60 minutes each..... 12.00
Pipe Organ—two lessons per week (private) of 45 minutes each..... 20.00
Harmony—two lessons per week (private) of 40 minutes each. 18.00
Harmony—two lessons per week (class) of 60 minutes each...12.00
Violin and Viola—two lessons per week (private) of 30 minutes each..... 16.00
Violin and Viola—two lessons per week (class) of 60 minutes each..... 12.00
Mandolin, Guitar, Banjo, etc.—two lessons per week (private) of 30 minutes each..... 12.00
Mandolin, Guitar, Banjo, etc.—two lessons per week (class) of 60 minutes each..... 9.00
Wood and Brass Wind Instruments—two lessons per week (private) of 30 minutes each..... 10.00
Wood and Brass Wind Instruments—two lessons per week (class) of 60 minutes each..... 8.00
Theory and Musical History—(class)..... 8.00

[When in the judgment of the Director and the teacher a student is capable of taking three private lessons per week, the tuition rate will be increased one-third.]

When students of Violin, Viola, Mandolin, Guitar, and Banjo, become sufficiently advanced to be admitted to membership in the Orchestra, or the advanced Mandolin and Guitar Club, tuition fees in these instruments will be remitted upon recommendation of the leaders of these organizations. (

Pianos for practice one hour per day will be furnished at $3.50 per quarter; two hours per day, $6.00 per quarter; three hours per day, $7.50 per quarter. Clavier practice, one hour per day, $2.00 per quarter.

All tuition and other fees are payable in advance to the Treasurer of the University.

Free Advantages.

The recitals and concerts by the Faculty and advanced students of the School of Music are all free to students of the University.

The Choral Society, Glee Club, Women's Chorus, the Military

Band, Orchestra, and Mandolin, Guitar and Banjo Clubs are all open to students of the University who are competent to enter them.

The courses in Violin, Viola, Mandolin, Guitar, Banjo, Banjeaurine, etc., are free to students of the University under certain conditions, as explained.

Piano students of the third and fourth grades will receive free instruction in elementary Theory and Musical History, one evening each week.

Courses of Instruction.

All the courses here announced are given every quarter, and may be begun at any time during the year, as the instruction is largely private.

Piano.

Miss McMurphy, and Miss Martin.

1, 2, 3. **First Grade.**—Emery's "Foundation Studies;" Studies by Gurlitt, Biehl, Bertini; Lynes' "Advancement Studies;" Compositions by Reinecke, Rohde, Emery, Lynes, Kullak, and others.

4, 5, 6.—**Second Grade.**—Studies by Czerny, Loeschorn, Heller, Krause, Clementi's Sonatinas; Kunz's Canons; "Schumann Album for the Young;" Compositions by Krause, Kullak, Emery, and other modern writers.

7, 8, 9. **Third Grade.**—Czerny's "Forty Daily Studies;" "Octave Studies" by Turner and Kullak; Bach's "Little Preludes and Fugues," and "Two Part Inventions;" Easier Sonatas of Haydn and Mozart; Mendelssohn's "Songs Without Words;" Compositions by Godard, Schumann, and others.

10, 11, 12. **Fourth Grade.**—Moscheles' opus 70; Kullak's "Octav Studies;" Clementi's "Gradus ad Parnassum;" Bach's "Suites" and "Three Part Inventions;" Sonatas by Haydn, Mozart, Beethoven; Compositions by Chopin, Schumann, Mendelssohn, Raff, Moszkowski, Schubert, Greig, and others.

13, 14, 15. **Fifth Grade.**—Chopin's op. 10 and 25, and Preludes; Bach's "Preludes and Fugues;" Sonatas by Beethoven; Concertos by Beethoven, Mozart, Mendelssohn; Compositions by Liszt, Henselt, Chopin, Weber, and others; Concertos for two pianos.

Organ.

Professor Ellenberger.

Organ students are expected to finish at least the first three grades in Piano before beginning Organ work.

1, 2, 3. **Third Grade.**—Stainer's "Organ Primer;" "Whiting's "First Studies;" "Rink-Best Organ School," Book III; Bach's "Easy Preludes and Fugues;" Whiting's "The Organist;" Hymn Tunes and

Registration; Compositions by Thayer, Silas, Volckmar, Guilmant, Lemmens, and others.

4, 5, 6. **Fourth Grade.**—"Rink-Best Organ School," Books IV and V; Bach's "Preludes and Fugues;" Accompaniment; Eddy's "Church and Concert Organist;" Anthems; Mendelssohn's Sonatas; Compositions by Guilmant, Merkle, Bach, and others; Whiting's "Twenty Preludes and Postludes."

7, 8, 9. **Fifth Grade.**—Bach's "Preludes and Fugues;" Sonatas by Mendelssohn, Guilmant, Merkle, Rheinberger; Compositions by modern Composers.

Harmony.

Professor Ellenberger.

A thorough knowledge of elementary Harmony is absolutely essential to every musician, whether artist or amateur. The School of Music offers a course of study covering one year, which includes a knowledge of intervals and scales, formation and progression of chords, treatment of suspensions, open harmony, etc., with practical work in harmonizing chants and chorals, and analyzing simple compositions. Emery's "Elements of Harmony" is the text-book.

1. Intervals, scales, formation and progression of common chords, with their inversions; seventh chords, modulations, harmonizing bass progressions, close harmony.

2. Modulations, Suspensions, Open Harmony, Appogiatura, and passing notes, Organ point, harmonizing melodies.

3. Harmonizing Melodies, Double Chant, Chorals, etc.

A course in Theory and Musical History will be offered if a sufficient number of students apply for the work to justify the organization of the class.

Voice.

1, 2, 3. **First Grade.**—Breathing, control of throat, jaws, tongue, lips, etc.; tone placing; dictation exercises for special needs of individual voices; selected technical exercises; English Ballads and Songs.

4, 5, 6. **Second Grade.**—Breathing, tone placing, dictation exercises, with selected technical exercises from Marchesi, Bordesi, Navo, Panofka, Cocone; English Ballads and Songs; German Lieder.

7, 8, 9. **Third Grade.**—Breathing, tone placing, dictation exercises, with selected technical exercises from Bordesi, Marchesi, Sieber; English and Italian Songs; German Lieder; English Oratorio; Concert Songs.

10, 11, 12. **Fourth Grade.**—Dictation exercises, with selected technical exercises from Bordogni, Sieber, Marchesi, Lamperti, etc.;

English Oratorio; Italian and German Operatic Selections; German Lieder; Concert Songs.

13, 14, 15. **Fifth Grade.**—Dictation exercises with advanced technical exercises from Bordogni, Marchesi, Lamperti, Sieber, etc.; English Oratorio; Italian, French and German Opera; Bravura Singing.

Violin.

Mr. Rude.

1, 2, 3. **First Grade.**—Tour's "Primer;" exercises in the First Position; development of tone; Pleyel's duets, opus 8.

4, 5, 6. **Second Grade.**—Schradieck's "Technical School," Book I; First, Second and Third Positions; Kaiser's "Studies," opus 20; Pleyel's duets, opus 48; Solos in First Position.

7, 8, 9. **Third Grade.**—Schradieck's exercises in the higher Positions; Kreutzer's Etudes; Pleyel's duets, opus 59; Fantasias by Singelee, Alard, etc.; Airs Varie DeBeriot.

10, 11, 12. **Fourth Grade.**—First Part of Fiorillo's Etudes; Maza's duets, opus 71; Krommer's Etudes, opus 22; Concertos by DeBeriot; Solos by Hauser, Wienawski, etc.

13, 14, 15. **Fifth Grade.**—Fiorillio's Etudes Continued; Fantasias by Vieuxtemps, Alard, etc.; Concertos by Mendelssohn, Beethoven, Bruch, Sarasate.

Advanced students may study ensemble works in conjunction with pupils from the Piano department. They are also admitted to the orchestra.

Guitar, Banjo, and Mandolin.

Mr. Rude.

In response to the demand growing out of the popularity of these instruments, courses are offered in each. Special attention is given to the development of a systematic fingering for both hands, tone, touch and accurate execution.

Text-books for Guitar: Holland, Carcassi, Carulli, Sor.

Text-books for Banjo: Dobson, Stewart, Henning.

Text-book for Mandolin: "Branzoli's Method."

Wood and Brass Wind Instruments.

Mr. Hill.

Equivalents for the Foregoing.

The courses outlined for the various branches are simply intended to represent, in a general way, the character of each year's work. It is not intended that each student shall take all of the studies mentioned in the branch he wishes to pursue, and equivalents are liberally used to suit individual cases.

General Announcements.

Students may enter the School of Music at any time, but it is greatly to their interest to enter, as far as possible, at the beginning of the quarter.

There will be no deduction for lessons missed by students, except in cases of prolonged illness.

Sheet music is furnished,—the best publications only,—at cost.

The library contains a large number of standard works upon music, all of which are available to students.

Students entering the School of Music within the first three weeks of a quarter will be charged for the full quarter; after that time, for the remainder of the quarter, and one week additional.

Students of the School of Music are not allowed to take part in public programs, or in musical organizations, without the consent of their respective teachers, and the Director of the School of Music.

All music students are expected to attend the regular Students Recitals, and to take part in them whenever so assigned.

All music students are expected to identify themselves with the various musical organizations of the school, and are required to enter any to which they are assigned by the Director of the School of Music.

Every music student is expected to attend all concerts given under the auspices of the University.

It is expected that all students will take sufficient work,—literary, or music, or both—to occupy their entire time.

The enrollment of private students for this year, in the School of Music, is .....

All correspondence regarding this department should be addressed to

C. A. ELLENBERGER,
Director of the School of Music,
Morgantown, W. Va.

THE COMMERCIAL SCHOOL.

STAFF OF INSTRUCTION.

The Faculty.

DENNIS MARTIN WILLIS, LL.B., Principal of the Commercial School, and Instructor in Bookkeeping and Shorthand.

ELIZABETH LEE WHITESCARVER, Instructor in Shorthand and Typewriting.

Other Instructors Giving Courses in this School.

THOMAS CLARK ATKESON, Ph.D., Dean of the College of Agriculture, and Professor of Agriculture.

OKEY JOHNSON, A.M., LL.B., Dean of the College of Law, and Professor of Constitutional, International and Corporation Law.

THOMAS EDWARD HODGES, A.M., Professor of Physics.

CHARLES HENRY PATTERSON, A.M., Professor of the English Language and Literature.

SAMUEL B. BROWN, A.M., Professor of Geology and Mineralogy.

WILLIAM P. WILLEY, A.M., Professor of Commercial Law.

ALEXANDER REID WHITEHILL, Ph.D., Professor of Chemistry.

JAMES DAVID THOMPSON, A.M., M.S., Assistant Professor of Mathematics.

JOHN ETHAN HILL, Ph.D., Instructor in Mathematics.

LLOYD LOWNDES FRIEND, A.M., Instructor in English.

WILLIAM EARL RUMSEY, B.S.Agr., Instructor in Botany.

The Commercial School.

This School was established in 1895, the object being to prepare young men and women for practical business life, and to give to students in other departments of the University an opportunity to study the subjects taught in this School. Students in the College of Arts and Sciences, the College of Law, and the other departments of the University may take any of the work outlined in the Commercial School without additional fees.

The instruction in the Commercial course is given in connection with the work done by the professors in the other departments of the University, the curriculum being articulated with the other courses.

Students are permitted to make arrangements by which they can take special courses in Bookkeeping, Shorthand and Typewriting, thus preparing themselves to act as secretaries, amanuenses, assistants in business offices, court reporters, etc. The special advantages include a thorough course in English and an acquaintance with the routine work and technicalities of business.

A certificate will be granted to students who complete the courses and pass the required examinations and tests.

Fees.

Tuition is free to West Virginia students. To students from other states, the tuition in the Commercial School is $5.00 per quarter—twelve weeks.

The matriculation fee is $5.00, payable upon entering the University by all students. Unless a student remains out of school for more than three years the matriculation fee is paid but once by each student.

The contingent fee of $2.00, for each quarter, is payable at the beginning of the quarter.

A typewriter fee of $1.00, payable at the beginning of each quarter, is charged each student for the use of the typewriter during the quarter.

The total University charge during the first quarter for students from West Virginia in the Commercial School amounts to $7.00, and each succeeding quarter $2.00. State cadets are furnished with books, stationery and uniforms free, and are not required to pay any fees.

Requirements for Admission.

The requirements for admission are as follows:

1. **History:**
   (a) General History,—Myers, or an equivalent;
   (b) United States History,—Fiske, or an equivalent.

2. **English:**
   (a) Spelling, punctuation and paragraphing;
   (b) English Grammar completed, with ability to write good English;
   (c) Reed & Kellogg's Grammar completed, or an equivalent.
3. **Mathematics:**
   (a) Arithmetic completed,—Greenleaf's, or an equivalent;
   (b) Algebra,—Milne's "High School Algebra," or an equivalent.
4. **Elementary Science:**
   (a) Physical Geography;
   (b) Human Anatomy and Physiology,—Cutter's, or an equivalent.
5. **Civil Government:**
   Fiske's, or an equivalent.

Requirements for the Two Years Commercial Course.

Chemistry,	1 course;
English,	6 courses;
Commercial Geography,	1 course;
Economics,	1 course;
Botany,	1 course;
Freehand Drawing,	1 course;
Bookkeeping,	2 courses;
Commercial Law,	3 courses;
Bank Accounting,	1 course;
Shorthand,	3 courses;
Typewriting,	2 courses;
History of Commerce,	1 course;
Physics,	1 course;
Geology,	1 course.
	25 courses.

DEPARTMENTS OF INSTRUCTION.

The studies that are taught in this department are the only courses described here. See the announcements of the Preparatory School and the College of Arts and Sciences for a description of the culture courses.

Bookkeeping.

Mr. Willis.

1. **Business Practice.** This is an introductory course, consisting of business practice and extensive drills in the use of vouchers, files, and in journalizing, posting, etc. In this course the student familiarizes himself with all the elementary rules and fundamental principles of bookkeeping. The student, in doing this work, is engaged as a bill clerk, shipping clerk, warehouseman, secretary, and bookkeeper for a firm doing a general merchandising business.

Text-book, "Office Routine and Bookkeeping." Prerequisites, Penmanship, Commercial Arithmetic, or an equivalent.

Fall, Winter, and Spring, 8:00; 24 U.

2. **Office Work and Accounting.** This course is a continuation of Course 1, the student becoming a member of the firm, and general manager and bookkeeper. There are frequent drills in making inventories of the property and resources and liabilities, financial statements, balances and balance sheets, etc. The student is required to write all articles of agreement, deeds, mortgages, bills of sale, etc. The adjustment of losses and the settlements with insurance companies after a fire is a special feature of this course. Changing the firm and the kind of business, etc., and changing from double to single entry bookkeeping. Text-book, "Office Routine and Bookkeeping." Fall, Winter, and Spring, 8:00; 24 U.

3. **Special Accounting.** A theoretical course in keeping the accounts in special lines of business, as lumber, shipments and consignments, commission and shipping, jobbing, installments, railroad bookkeeping, etc. This is an advanced course which is not required in the regular Commercial Course. Text-book, "Advanced Bookkeeping," Williams & Rogers. Prerequisite, Bookkeeping 1 and 2. Fall, Winter, and Spring, 8:00; 24 U.

4. **Bank Accounting.** A complete course in bank accounting and practice, consisting of working in the bank as teller, bookkeeper, etc.; and the theoretical work as outlined in the text. This is the system that is universally used in the banks of this country and approved by the National Bankers' Association. Prerequisites, Bookkeeping 1 and 2. "New Banking," Williams & Rogers.

Fall, Winter, and Spring, 8:00; 24 U.

Shorthand.

Mr. Willis and Miss Whitescarver.

1. **Theory.** This course includes the basis and fundamental principles of the art. Special attention is given to accuracy in the execution of the consonants. Thorough drills are given in the use of vowels and vowel positions. Introduction of word signs and special phrasing from day to day, and cumulative principles, modifications of consonants and affixes, as outlined in Dement's "Pitmanic Shorthand," to page 88.

Fall, 9:00; Winter, 10:00; and Spring, 11:00; 24 U.

2. **Cumulative Phrasing.** This course is a continuation of Course 1. Cumulative principles and affixes are introduced in their natural order. Following this, cumulative phrasing, which consists in the indication of the omission of words by special use of the principles given in Course 1. Special contractions and special phrasing, etc. This work will be presented in the order given in Dement's "Pitmanic Shorthand," pages 88 to 232.

Fall, 11:00; Winter, 9:00; Spring, 10:00; 24 U.

3. **Speed Practice and General Dictation.** Letter writing, speed practice, and writing after general dictation. Writing testimony and argument will be a special feature in the course. Special attention is given to each individual student in this course in order to prevent speed practice from destroying accuracy of notes, etc. Most of the dictation and reading exercises are to be found in Dement's "Dictators," Nos 1, 2, 3, 4. Fall, 10:00; Winter, 11:00; Spring, 9:00; 24 U.

4. **Court Reporting.** This is a special course in court reporting given to students who have completed Courses 1, 2, and 3. This work is given in connection with the moot courts in the College of Law. The student is appointed court stenographer by the judge of the court, and reports the cases tried in that court and in the justices' courts of the same department. Duplicate reports are submitted for inspection. This gives the student actual practice in court reporting, as required by the West Virginia law. In addition to this actual practice daily drills are given to acquire speed in writing and transcribing testimony, etc. Brown's "Court Reporting" is used as a text-book. Winter, and Spring, 2:00 to 4:00.

Penmanship.

Mr. Willis.

1. **Penmanship.** This is a course of plain business writing. Students are required to eliminate all unnecessary flourishes and to reduce their writing to a rapid, plain and abbreviated style of penmanship. They are permitted to use either the vertical or slant writing. The modern and improved methods of instruction are used, with Palmer's "Penmanship Budget" as a guide.

Fall and Winter; 24 U.

Typewriting.

Miss Whitescarver.

1. **Typewriting.** The "Smith Premier" machine is used for instruction and practice. The instruction includes thorough drills on the various exercises outlined in the text. This furnishes the student with a knowledge of the mechanism of the machine, which is essential in its adjustment. Text-book, Barnes' "Touch Typewriting." Fall, Winter, and Spring, 8:00 A. M. till 4:00 P. M.

Commercial Law.

Dean Johnson and Professor Willey.

1. **Contracts.** The object of this course is to group, set in order and illustrate the entire elementary doctrine of the law of contracts in such a manner as to render obvious their application in practice. This course is given by lectures, with assigned readings from a prescribed text-book, and law reports.

Professor Willey. Fall, 9:00; 14 U.

2. **Negotiable Paper.** This course deals with the law of negotiable paper, beginning with the origin of negotiability, and showing the mode and practice of Law Merchant, and the effect the various statutes have had upon them. The mode of instruction is by lectures, being the same lectures taken by students of the LL.B. course, and by assigned cases to be read as authority.

Professor Willey. Half course. Winter, 9:00; 14 U.

3. **Bailments and Suretyship.** The work in the course embraces the law of bailments, which to-day is the great factor in commerce, and the law of guaranty and suretyship, and the law of insurance. Instruction is given by lectures, quizzes and assigned readings. Professor Willey. Half Course. Winter, 9:00; 14 U.

4. **Agency.** This is a course in the law of agency. The course covers the principles that govern the relations of principal and agent, and of their authority, and what constitutes revocation, etc. Instruction is given by lectures, quizzes and assigned cases to be read. Dean Johnson. Half course. Spring, 9:00; 11 U.

Commercial Geography and History.

Professor Atkeson.

1. **Commercial Geography.** A description of the surface of the earth, with special reference to the production, manufacture, transportation, and exchange of articles of trade. A general outline of the countries of the world, soil, climate, agricultural products, forests, manufactories, quarries, mines, centers of industry, foreign relations, ways of communication, social relations and conditions, imports, exports, and markets. Special attention is given to the study of the United States, area, climate, position, population, natural resources, raw products, manufactures, waterways, railways, seaports, exports, imports, reasons for rapid growth of Western cities, industrial possibilities. Text-book, Chisholm's "Smaller Commercial Geography." Half course. Fall, 10:00; Winter, 11:00; A.

2. **History of Commerce.** History of Commerce; methods of exchange in ancient times; shipping of the ancients; fairs and markets; results of maritime discoveries; changing the commercial routes; international treaties affecting commerce; scientific and industrial discoveries affecting commerce; trade restrictions; consuls and modern commerce; boards of trade; stock and produce exchanges; modern transportation; freight express companies; insurance; modern modes of preparing and shipping articles of merchandise; circulation of commodities between cities and countries; trade statistics; dependence of manufactures upon producers of raw material; nomenclature of commerce. Text-book, Gilbert's "History and Principles of Commerce."

Fall, 10:00; Winter, 11:00. A.

THE PREPARATORY SCHOOLS.

The Preparatory School at Morgantown.

STAFF OF INSTRUCTION.

The Faculty.

————, Principal.

*ALFRED JARRETT HARE, A.B., Professor of the Latin Language and Literature.

WILLIAM S. BURRAGE, Ph.D., Acting Assistant Proiessor of Latin.

JAMES MADISON BURNS, Major U. S. Army, Professor of Military Science and Tactics, and Commandant of Cadets.

LLOYD LOWNDES FRIEND, A.B., Instructor in English.

DANIEL WEBSTER OHERN, A.M., Assistant in Greek.

JAMES DAVID THOMPSON, A.M., M.Sc., Assistant Professor of Mathematics.

JOHN ETHAN HILL, Ph.D., Instructor in Mathematics.

*On leave of absence until June, 1901.

Other Instructors Giving Courses in this School.

SAMUEL B. BROWN, A.M., Professor of Geology and Mineralogy.

THOMAS EDWARD HODGES, A.M., Professor of Physics.

RICHARD ELLSWORTH FAST, LL.B., A.M., Professor of American History and Political Science.

FREDERICK WILSON TRUSCOTT, Ph.D., Professor of Germanic Languages and Literatures.

CHARLES CHOLLET, A.B., Associate Professor of Romance Languages and Literatures.

EVA EMMA HUBBARD, Instructor in Drawing.

Purpose.

The Preparatory School is maintained to fit young men and young women for the various courses of the University, and it offers excellent opportunities for both mental and moral development under helpful guidance. Those who have not the advantages of an academy or good high school near home may here receive instruction in any of the common branches. Many of the young men in this school are enrolled in the Cadet Corps, and the habits of neatness, accuracy, and mental and bodily discipline inculcated therein are an invaluable part of a young man's training.

Students who are deficient in only one or two branches of this School may, while finishing this work, take some College studies. But all of the required work of the Preparatory course must be completed before a student is permitted to go on regularly into any University course. Those who do not expect to take a course in the University will be given such studies in the Preparatory School as they are able to pursue profitably.

Admission.

For admission to this School applicants must be at least fifteen years of age, and they should present a certificate of scholarship from their last instructor or the last school with which they were connected. They should be proficient in the ordinary course of study pursued in the public schools of the state, and especially in English grammar and arithmetic. No regular examination is required for admission to the classes of the first year, the student being admitted on trial; if he is not able to pursue the course successfully, he is required to withdraw. Students desiring to take the studies of the second, third or fourth Preparatory year will present certificates of work done elsewhere or will be examined as to their ability to enter the classes of that year.

Co-Education.

Young men and young women are admitted on equal terms.

DEPARTMENTS OF INSTRUCTION.

English.

Mr. Friend.

1. **Reading and Composition.** This, with the following course, involves, first, a practical drill in orthography, punctuation, etc. Secondly, the reading of such classics as are suitable to this grade of work, with the object of leading the student to an appreciation of good literature. Fall, first section, 8:00; second section, 9:00; 10 M.

2. **Reading and Composition.** Continuation of Course 1.
Winter, first section, 8:00; second section, 9:00; 10 M.

3. **Grammar and Composition.** A thorough study of the essentials of English Grammar, with continued reading of classics, oral analysis, composition, etc.
Spring, first section, 8:00; second section, 9:00; 10 M.

4. **Grammar and Composition.** Continued practical work in Grammar. Careful reading with analysis and word study of one of the English classics required for entrance to college.
Fall, first section, 10:00; second section, 11:00; 10 M.

5. **Practical Lessons in English.** Oral and written reproduction, composition, etc., with study of one of the English classics as in Course 4. Winter, first section, 10:00; second section, 11:00; M.

6. **Practical Lessons in English.** Continued critiques, reviews, analysis, etc., with study of one of the English classics as in Course 4. Spring, first section, 10:00; second section, 11:00; 10 M.

7. **Elements of Rhetoric.** Some practical text in Rhetoric, with continued drill in composition and one of the English classics, as in Course 4. Fall, 10:00; 23 S.

8. **Literature and Rhetoric.** Careful reading of some of the British and American classics. In this and the following course, the classics are read chronologically, with a study of each author among his contemporaries, and as a presentation of his period in literature and history. Continued application of the principles of Rhetoric in review and theme writing. Winter, 10:00; 23 S.

9. **Literature and Rhetoric.** Continuation of Course 8.
Spring, 10:00; 23 S.

Latin.

Professor Hare.

1. **Etymology.** Chase and Stuart's "First Year in Latin," pages 9-125. Fall, 11:00; Winter, 8:00; Spring, 9:00; 11 M.

2. **Syntax.** Chase and Stuart's "First Year in Latin," pages 126-200. Fall, 8:00; Winter, 11:00; Spring, 9:00; 11 M.

3. **Oratio Obliqua, and Caesar (Book I, chs. 1-29).** Chase and Stuart's "First Year in Latin," completed.
Fall, 8:00; Winter, 9:00; Spring, 11:00; 11 M.

4. **Caesar's Gallic War (Books I and II).**
Fall, 10:00; Winter, 9:00; Spring, 8:00; 11 M.

5. **Caesar's Gallic War (Books III and IV).**
Winter, 10:00; 11 M.

6. **Cicero's First and Second Orations Against Catiline.**
Spring, 10:00; 11 M.

7. **Cicero's Third and Fourth Orations Against Catiline, and the Oration for Archias.** Fall, 9:00; 11 M.

8. **Virgil's Aeneid (Books I, II, and III).** Winter, 9:00; 11 M.

9. **Virgil's Aeneid (Books IV, V, and VI).** Spring, 9:00; 11 M.

Allen and Greenough's "Grammar," Revised Edition, is used in Courses 4-9.

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*Dr. Burrage taught the Preparatory Latin during the year 1900-01.

Greek.

Professor Green and Mr. Ohern.

1. **White's First Greek Book (Chapters I-XL).** This course is for beginners. The work covers pronunciation, accent, declensions and conjugations, etymology of words, and simple translations from Greek into English and from English into Greek to illustrate the principles of grammar as given in the text.
Fall, 9:00; Spring, 8:00; 8 M.

2. **First Greek Book (Completed).** This is a continuation of Course 1. Prerequisite, Greek 1. Fall, 10:00; Winter, 9:00; 8 M

3. **Xenophon's Anabasis (Book I).** Study of connected discourse and syntax. Prose composition once a week. Texts, Goodwin and White's "Xenophon's Anabasis;" Goodwin's "Greek Grammar;" Pearson's "Greek Prose Composition." Prerequisites, Greek 1 and 2. Fall, 11:00; Winter, 10:00; Spring, 9:00; 8 M.

4. **Xenophon's Anabasis (Books II, III, and IV).** Prose Composition once a week. A study in forms of Greek narrative. A fuller knowledge of the grammar is required. Prerequisites, Greek 1, 2,

and 3. Goodwin's "Xenophon's Anabasis;" Goodwin's "Greek Grammar;" Pearson's "Greek Prose Composition."

Fall, 8:00; Winter, 11:00; Spring, 10:00; 8 M.

5. **Lysias' Orations.** Prose composition once a week. A study of the form of Greek orations and Lysias' style. Collateral library work assigned to each student. Prerequisites, Greek 1, 2, 3, and 4, or their equivalent. Winter, 8:00; Spring, 11:00; 8 M.

6. **Homer's Iliad or Odyssey (Books I, II, and III) and Homeric Verse.** All the text is read metrically, and passages are memorized. Etymology, Mythology, and Prosody receive special attention. Seymour's "Iliad." Collateral reading: Jebb's "Introduction to Homer," Gladstone's "Time and Place of Homer." Prerequisites, Greek 1, 2, 3, 4, 5. Spring, 8:00; 8 M.

Note.—Six courses constitute the maximum and three courses the minimum preparatory requirements in Greek.

French.

Associate Professor Chollet and Miss Carter.

1. **Elementary Course.** Grammar, reading and practice in pronunciation and oral understanding. Chardenal's Complete French Course; Bocher's Otto's "French Reader."

Fall, first section, 8:00; second section, 10:00; 11 U.

2. **Elementary Course.** A continuation of Course 1.

Winter, first section, 8:00; second section, 10:00; 11 U.

3. **Modern Prose.** A continuation of Course 2. Reading from works by Erkmann-Chatrian, Dumas, Daudet, George Sand, etc. Chardenal's "Advanced French Exercises."

It is expected that in Courses 1, 2, and 3, the elements of French Grammar will be mastered, and a fair pronunciation and oral intelligence acquired.

Spring, first section, 8:00; second section, 10:00; 11 U.

4. **Fiction of the Nineteenth Century.** Works by Daudet, Dumas, About, etc.; La Fontaine's "Fables." Grandgent's "Composition." Oral and auricular practice, continued through Courses 5 and 6. For students who have had one year of French.

Fall, 10:00; 11 U.

5. **Historical and Dramatic Works of the Nineteenth Century.** Michelet, Labiche, Dumas, Scribe, Augies, Banville.

Winter, 10:00; 11 U.

6. **Drama of the Seventeenth Century.** Corneille, Racine, Molière. Spring, 10:00; 11 U.

Note.—Courses 4, 5, and 6 are continuous, and it is recommended that they be taken in this order.

German.

Professor Truscott and Mr. Porterfield.

1. **Elementary German.** A course for beginners, the object being to acquaint the student with the elements of grammar, to give him a reading knowledge of the easiest German prose, and as much practice in pronunciation as possible. Thomas' Grammar, Part I; Harris' Reader, Part I.

Fall, first section, 9:00; second section, 10:00; 19 U.

2. **Elementary German.** A continuation of Course 1. Reading of easy prose and poetry. Some poems will be memorized and especial attention given to correct pronunciation. Reading at sight. Harris' Reader, Parts II, IV, and VI.

Winter, first section, 9:00; second section, 10:00; 19 U.

3. **Elementary German.** A continuation of Course 2. Reading and conversation. Elementary work on composition accompanied by a review of the Grammar. "Immensee." "Höher als die Kirche." "Im Zwielicht." Hatfield's "Materials for Composition."

Spring, first section, 9:00; second section, 10:00; 19 U.

4. **German Prose.** Copious reading of German prose to render the student familiar with the idioms of the language and give him a large and varied vocabulary. Nichol's "Three German Tales," Bernhardt's "Novelleten-Bibliothek." Fall, 8:00; 19 U.

5. **Composition and Conversation.** Practice in writing German and translation of English prose into idiomatic German. A part of the time will be devoted to exercises in conversation. "Methode Berlitz, Erstes Buch." Harris' "Prose Composition."

Winter, 8:00; 19 U.

6. **German Poetry.** "Hermann und Dorothea." Familiar German ballads. Spring, 8:00; 19 U.

History.

Professor Fast, Associate Professor Daniels and Mr. Poe.

1. **History of Greece.** An outline study of Greek history with special reference to the development and peculiar characteristics of Greek civilization. Fall, 8:00; 4 M.

2. **History of Rome.** An outline study of Roman history from the founding of Rome to 476 A. D. Winter, 8:00; 4 M.

3. **History of the Middle Ages.** In this course, the history of the period between ancient and modern times will be broadly sketched, and a study made of the institutions peculiar to the middle ages. Spring, 1901, 9:00; 4 M.

4. **Modern European History.** This course will trace the history of Europe in the last four centuries, special attention being

given to the period of religious reformation, and to the series of revolutions which have established the present state systems.

Spring, 1902, 9:00; 4 M.

Courses 1, 2, 3, and 4 are intended to give a general view of European history, and are recommended to all students planning to take college courses in history.

5. **History of England.** This course will outline the history of England from the Teutonic settlement to the present time. It is intended chiefly as an introduction to the college courses in English history, but it will serve also to give a general view of the subject to students not planning to take the advanced work. Fall.

6. **Outlines of United States History.** A general course of narrative and political history required for admission to all other courses in United States history. Fiske's "History of the United States." Winter, 9:00; 6 M.

Mathematics.

Assistant Professor Thompson and Dr. Hill.

Algebra.

1. **Algebra,** up to and including Simple Equations. Charles Smith's "Elementary Algebra."

Fall, 8:00; Winter, 11:00; Spring, 9:00.

2. **Algebra,** up to Quadratics. Charles Smith's "Elementary Algebra." Fall, 8:00; Winter, 8:00; Spring, 11:00.

3. **Algebra,** including Progressions, Permutations and Combinations, to logarithms. Charles Smith s "Elementary Algebra."

Winter, 8:00; Spring, 11:00.

4. **Algebra.** Theory of Equations, Binominal Theorem, Exponentl and Logarithmic and other Series. Wells' "University Algebra." Fall, 11:00; Winter, 10:00; 3 M.

Plane Geomery.

1. **Plane Geometry.** The first two books. Wentworth's "Plane Geometry." Fall, 9:00; Spring, 8:00; 7 M.

2. **Plane Geometry.** Completed. Wentworth's "Plane Geometry." Fall, 11:00; Winter, 9:00.

3. **Solid Geometry.** Wentworth's "Solid Geometry."

Fall, 10:00; Winter, 11:00; 3 M.

Trigonometry.

1. **Plane Trigonometry.** Well's "Revised Trigonometry."

Professor Stewart. Fall, 10:00; Spring, 9:00, 11:00; 3 M.

Botany.

Professor Copeland.

1. **Elementary Laboratory Botany.** This is very largely a laboratory course, with dissecting and compound microscopes, and

including some simple experiments. A text book will be used only for a general guide. Fall, Winter, 10:00; 30 U.

2. **Elementary Field Botany.** This course is chiefly outdoor work, and will include practice in the determination of vascular plants. Spring, 10:00; 30 U.

Courses 1 and 2 may both be presented for entrance credit in Botany. Either may precede the other, but they should be taken in successive quarters.

Physiology.

Professor Magill.

An elementary course for first year students.

Winter, 9:00; 30 U.

Physics.

Professor Hodges.

1. **Physics.** An elementary course for third or fourth year students. Recitations, supplemented by experiments and demonstrations. Prerequisites, Elementary Algebra and Plane Geometry. Thwing's "Elementary Physics." Fall, 9:00; 11 S.

2. **Elementary Physics.** Electricity and Magnetism. Sound and Light. Continuation of Course 1. Winter, 9:00; 11 S.

Courses 1 and 2 will satisfy the entrance requirements in Physics. Students in the College who have not presented work in Physics among their entrance requirements, may receive college credit for these courses if both are taken.

Physical Geography.

Professor Brown.

An elementary course for first year students. Fall, 9:00; 30 S.

THE PREPARATORY SCHOOL AT MONTGOMERY.

JOSIAH KEELY, A.B., Principal; History and Latin.

RUBY RAY KNIGHT, B.S., Mathematics and German.

ALTHA WARMAN, A.B., Greek and English.

MARION F. CABELL, Instrumental Music, and French.

General Information.

The Preparatory School of the West Virginia University at Montgomery in Fayette county was established under the provisions of an act of the Legislature passed February 16, 1895. A suitable building was erected on a beautiful site overlooking the town of Montgomery, the Kanawha river and the Chesapeake and Ohio Railroad, and the School was opened the first Monday in January, 1897.

The control of the School is vested in the Board of Regents of the West Virginia University and the State Superintendent of Free Schools.

The President of the University is ex officio .President of this School.

The course of study and the length of quarters are the same as in the Preparatory School at Morgantown (see pages 164-169).

Tuition is free to all young men and young women of West Virginia.

The citizens of Montgomery donated the spacious and beautiful grounds for the School, and they are enthusiastic workers for its welfare. The last Legislature made liberal appropriations for this School.

A new wing to the building is to be built at once.

It is expected that all who enter the University Preparatory

School at Montgomery will make every possible effort to go on from there to the University.

The school is easy of access from the counties of Fayette, Raleigh, Summers, Greenbrier, Nicholas, Clay, Kanawha, Boone, Mercer, Monroe, Wyoming, and the entire southern section of the state.

A dormitory has been erected, which furnishes excellent lodging-rooms and board. It is under the control of the Principal of the School.

The School building is well furnished, and has a good working library. The work is of the most thorough and careful character.

For information concerning the School, application should be made to the Principal.

THE MILITARY DEPARTMENT.

JAMES M. BURNS, Major U. S. A., Commandant of Cadets and Professor of Military Science and Tactics.

Extract from Militia Law, State of West Virginia, 1901, sec. 100: "The Corps of Cadets of the West Virginia University shall be held as the Training School of the West Virginia National Guard, subject to such duty as the Commander-in-chief may order."

State cadets, to the number of 144, are appointed by the Regents of the University, and receive their uniforms, books, stationery, tuition, use of library, use of arms and equipments, and ammunition for target practice free. No charge is made for their admission. They constitute the public guard of the University and of the public property belonging thereto. In order to receive an appointment as state cadet a candidate must be between sixteen and twenty-one years of age, and must furnish evidence of good moral character. Application for a cadet appointment should be made to one of the Regents of the University. (See "Board of Regents," page 9). State cadets' term of enlistment is two years.

Students of the University who desire military instruction, and who are not state cadets, are allowed to join the corps as volunteer cadets. They receive no uniform from the state.

All cadets are required to wear a neat-appearing gray uniform at drill. This uniform may be worn with propriety on all occasions.

Officers of the regular army are specially detailed by the President of the United States, one to act as Commandant of Cadets, and one to make an annual inspection of the Corps.

Special Rewards for Military Excellence.

The names of the three most distinguished cadets are published annually in the official U. S. Army Register.

Gold and silver medals are awarded annually to cadets for special excellence.

Cadets who are recommended for promotion after graduation

receive commissions as officers, signed by the Governor of the state, and such commission entitles them to rank with other officers of the National Guard of West Virginia, according to grade and date of commission.

Administration and Instruction.

For the purpose of administration and drill the Corps of Cadets is organized as an infantry battalion. There is also an artillery detachment. Infractions of discipline are referred to a court-martial, consisting of cadet officers, for investigation. Cadets are divided into sections corresponding to their military proficiency and length of service. New cadets are required to enter the fourth (lowest) section, but those who have had previous military instruction may be transferred to a higher section upon passing a satisfactory examination.

The course of military instruction, practical and theoretical, is intended to fit all who graduate to perform efficiently the duties of officers in the National Guard of West Virginia. In addition to this, all cadets are taught that patriotism, punctuality, obedience, attention, alertness, and neatness are at all times expected of them. It is believed that the training a cadet receives fits him to become a good citizen as well as a good soldier. The qualities which go toward making the good officer are no less valuable, when considered in connection with the business man, professional man, or farmer. They are the qualities which ordinarily insure success in every walk of life. The excellent physical results which follow systematic military drill are well known and acknowledged by all competent judges.

The work in the military department requires about four hours each week. The winter term is devoted to Physical Training and recitations in tactics and other military subjects. The military course is the same as that of the West Point Military Academy, and when a cadet graduates he is qualified to pass an examination for a commission in the United States Army. This work is taken in connection with other University work.

Physical Training.

Beginning with the winter quarter a regulation suit will be required. This suit will consist of Turner pants, blue knit sleeveless shirt or jersey, and shoes with rubber or buck soles.

The regular course in Physical Training occupies two years, and is required of all young men in the Preparatory School, and of all members of the cadet corps. Cadets may be excused by the Commandant for sufficient reasons.

FIELD, STAFF AND BAND.

Commandant, J. M. Burns, Major, U. S. A.

Cadet Major, J. R. Moreland.

Cadet Captain, Clarence Poe, Artillery Officer.

Cadet First Lieutenant, F. P. Corbin, Adjutant.

Cadet First Lieutenant, E. L. Cole, Quartermaster.

Cadet First Lieutenant, T. G. Hill, Chief Musician.

Cadet First Lieutenant, E. Jones, Signal Officer.

Cadet Sergeant Major, E. C. Tabler.

Cadet Quartermaster Sergeant, W. H. Bayles.

Cadet Orderly Sergeant, H. L. Duval.

Cadet Principal Musician, J. V. Cooke.

Cadet Sergeant, H. R. Muldoon, Band.

Cadet Private Band.

R. C. Crago,
A. P. Freed,
G. E. Graham,
G. C. Winans,
F. W. Muldoon,
A. R. Bloom,
G. C. Rhodes,
P. H. Martin,
H. H. Keener,
W. J. Ruble.

Company "A."

Captain, G. H. Bayles.

First Lieutenant, H. A. St. Clair.

Second Lieutenant, C. Alexander.

First Sergeant, H. W. Dent.

Sergeants.

H. F. Rogers,
S. Shloss,
W. M. Watkins,
L. A. Hill.

Corporals.

D. T. Robinson,
E. A. Flowers,
A. D. Ellison,
M. Stathers.

Musicians.

D. Miller,
M. R. Woodward.

Privates.

C. M. Bennett,
E. H. Brannon,
W. T. Brown,
E. C. Brown,
G. J. Gore,
A. G. Hallock,
J. W. Haymond,
S. Henderson,
B. P. Henritze,
J. Jenkins,
R. G. Millan,
L. W. Mitchell,
E. B. Moore,
L. B. McNeill,
W. F. McCullough,
C. L. Pearcy,
C. A. Phillips,
J. Reese,
C. H. Reinhart,
J. M. Ritter,
C. F. Ross,
W. E. Scott,
J. W. Sommerville,
B. F. Sperow,
R. R. Vaughan,
C. Vossler,
H. W. Wambsley,
H. Young.

Company "B."

Captain, T. S. Lang.

First Lieutenant, F. D. Hutchinson.

Second Lieutenant, R. Dodson.

First Sergeant, J. C. Lewis.

Sergeants.

D. W. Parsons, W. E. Parsons, J. H. Auvil.

Corporals.

H. J. Hervey, C. Watson, E. U. Richards.
W. R. Thurmond,

Musicians.

J. D. Stone, S. A. Smith.

Privates.

S. N. Babb,
W. P. Bonar,
J. H. Bucher,
J. D. Cooke,
S. R. Crawford,
J. F. Dunbar,
W. A. Duggan,
A. Hall,
G. S. Hartley,
W. Lang,
J. F. Lane,
P. W. McMillen,
T. J. McBee,
W. O. Musgrave,
C. B. W. Neale,
E. M. Pemberton,
D. Richards,
J. J. Ross,
D. Rogers,
G. G. Somerville,
R. Sterrett,
J. M. Trapnell,
H. A. Voigt,
J. T. West,
H. E. Wilson,
W. K. Walton,
B. M. Whaley.

Company "C."

Captain, H. S. Lively.

First Lieutenant, R. Rogers.

Second Lieutenant, M. M. Neely.

Sergeants.

J. C. M. Forquer, W. W. Smith. A. M. Lucas.

Corporals.

R. W. Trapnel, W. R. Shaw, R. H. Killingsworth.
D. Dawson,

Musicians.

I. W. Umbell, H. K. Graham.

Privates.

K. C. Atkeson,
H. C. Babb.
T. B. Bowman,
S. C. Carney,
Wm. DeGardeyn,
C. A. Ellison,
R. B. Fairfax,
M. C. Gatewood,
F. R. Hewitt,
J. D. Hewitt,
C. L. Hopkins,
J. E. Larew,
E. B. LeFevre,
R. C. Mitchell,
S. C. Moore,
C. A. Semmelman,
F. B. Steele,
N. M. Schrader,
R. T. Smith,
J. E. Wilson,
F. R. Yoke.

DEPARTMENT OF PHYSICAL TRAINING.

BENJAMIN GRAEFF PRINTZ, Director of the Gymnasium, and Instructor in Physical Training.

The Gymnasium occupies the first floor of Commencement Hall. It is large and well ventilated, is heated in winter, and is equipped with modern and approved appratus, and with plunge and shower baths. It is open for the use of students every day except Sunday. There are classes for both the men and women students.

Physical Training.

Beginning with the Fall Quarter, 1901, the following courses will be given:

Individual Body Building.

Monday, Wednesday, and Friday, 2:00 to 4:00 P. M.

Apparatus Work. a. Club swinging. b. Horse, parallel bars, vaulting, horizontal, etc. Tuesday and Thursday, 4:00 to 5:00 P. M.

Boxing. Monday, Wednesday, and Friday, 4:00 to 5:00 P. M.

Those wishing to take boxing must furnish their own gloves. A regulation gymnasium suit will be required for all work taken in the Gymnasium. Each student will be measured, and then assigned special work to suit his individual needs. Games, such as basket-ball, and indoor base-ball, are provided for.

INSTRUCTION BY CORRESPONDENCE.

The Department of Instruction by Correspondence is intended to help students who for any reason cannot come to the University. It is believed that a great number of persons may be helped by University guidance in many lines of study.

For the college year 1901-2 no courses in this Department are announced, but the various instructors will be glad to help as far as possible, with their guidance and advice, all who may apply. In this way students may be prepared to pass examinations at the University for advanced standing.

STUDENTS.

Graduate Students.

Fellows.

Atkeson, Thomas Zephaniah, Morgantown.
B.Agr., West Virginia University, 1899; B.S.Agr., ibid., 1900
Fellow in Agriculture.

Carter, Jeannette Eva, Fairmont.
Ph.B., Adrian College, 1889.
Fellow in Romance Languages.

Conley, George Washington, Craigmoor.
A.B., West Virginia University, 1900.
Fellow in Physics.

McVicker, Alberta Claire, Morgantown.
A.B., West Virginia University, 1900.
Fellow in English.

Moreland, Eleanor Brown, Morgantown.
A.B., West Virginia University, 1898.
Fellow in Domestic Science.

*Morris, Robert, Morgantown.
A.M., West Virginia University, 1900.
Fellow in Economics.

Parke, Henry Hall, Sycamore, Ills.
M.S., University of Michigan, 1900.
Fellow in Zoölogy.

Poe, Clarence, Grafton.
A.B., West Virginia University, 1900.
Fellow in History.

Porterfield, Allen Wilson, Bedington.
A.M., West Virginia University, 1901.
Fellow in German.

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*Resigned to accept the Henry Lee Memorial Fellowship at Harvard University.

Other Graduate Students.

Brand, Willa Norvella, Morgantown.
A.B., West Virginia University, 1898.

Browning, Bertha Cleland, Wellsburg.
A.B., West Virginia University, 1900.

Bush, Ira Benton, Auburn.
A.B., West Virginia University, 1900.

Butcher, Willa Hart, Fairmont.
A.B., West Virginia University, 1900.

Ebers, Charles H., Benwood.
A.B., West Virginia University, 1900.

Fortney, Lorain, West Liberty.
A.B., West Virginia University, 1900.

Frank, Harrison Jules Louis, Wheeling.
A.B., West Virginia University, 1900.

Gallup, William Henry, Morgantown.
A.M., Allegheny College, 1885.

Gorman, M. E., Morgantown.
A.B., West Virginia University, 1895.

Henderson, James Flynn, McKeesport, Pa.
A.B., Washington and Jefferson College, 1900.

Hughes, William Wellington, Weston.
A.B., West Virginia University, 1900.

Hunt, Caroline Louisa, Evanston, Ills.
A.B., Northwestern University, 1888.

Jamison, Gillian, Morgantown.
A.B., West Virginia University, 1900.

Jones, Hanna Louise, Morgantown.
A.B., West Virginia University, 1900.

Johnson, Thomas Carskadon, Morgantown.
A.M., West Virginia University, 1900.

Johnson, Drusilla Victoria, Morgantown.
A.B., Bethany College, 1900.

Lough, Myron Carleton, Fairmont.
A.B., West Virginia University, 1900.

Marley, John Tilton, Morgantown.
A.B., St. Stephens College, New York, 1894.

McChesney, Alexander Gallatin, Charleston.
A.M., West Virginia University, 1900.

McCutcheon, John Lewis, Morgantown.
A.M., Rochester University, 1888.

Meredith, William Melvin, Huntington.

Naret, William Frazier, Morgantown.
A.M., West Virginia University, 1900.

Ohern, Daniel Webster, Morgantown.
A.B., Drake University, 1898; A.M., West Va. University, 1900.

Pollock, William McCally, Morgantown.
M.S., West Virginia University, 1900.

Raymond, Mrs. Josephine, Morgantown.
M.L., University of Wisconsin, 1897.

Reynolds, Ethel Toy, Morgantown.
B.S., West Virginia University, 1897.

Rightmire, Ina, Morgantown.
A.B., West Virginia University, 1900.

Robe, Wilbur Lawrence, Morgantown.
A.B., West Virginia University, 1900.

Ryan, Wm. D., Morgantown.
A.B., Drake University, 1898.

Smith, Alpheus Wilson, Philippi.
A.B., West Virginia University, 1900.

South, Walter Haines, Morgantown.
A.B., West Virginia University, 1900.

South, Winifred O., Morgantown.
A.M., West Virginia University, 1898.

Wallace, Ira Melvin, Morgantown.
A.B., Thiel College, 1894.

Warman, Altha, Montgomery.
A.B., West Virginia University, 1893.

Whitham, William Henry, Morgantown.
A.M., West Virginia University, 1900.

White, Estelle S., Morgantown.
A.B., West Virginia University, 1895.

—45

The College of Arts and Sciences.

Seniors.

Barnes, Isaac Allen,.....Morgantown.
Bayles, Willie Haldeman,.....Gladesville.
Bittle, Mona Alethea,.....Morgantown.
Brooke, Chas. Frederick Tucker,.....Morgantown.
Colebank, Ora Octave,.....Stewartstown.
Conley, Emma,.....Fon du Lac, Wis.

Connell, John Harden,.....Wellsburg.
Cooper, Price Winfred,.....Auburn.
Core, Minnie Leigh,..... .....Mt. Morris, Pa.
Correll, Harry Davis,.....Lewisburg.
Crossland, Howard Ralph,.....New Haven, Pa.
Cushwa, Frank Wm.,.....Martinsburg.
Dailey, Jas. Thomas,.....Buckhannon.
Derbyshire, Chas. Edward,.....Huntington.
Dille, Rachel Jane Hagans,.....Morgantown.
Dodson, Raymond,..... Spencer.
Frankenberger, Hugo,..... .....Charleston.
Garrison, Harry Alpheus,.....Morgantown.
Hawse, Allen Lee,.....Needmore.
Hickman, Chas. Benton,.....Fairmont.
Hill, Lucian Anselm,.....Hinton.
Hott, David, Jr.,.....White Hall, Va.
Hubbard, Beulah Brock,.....Morgantown.
Johnson, Sarah Waugh,.....Morgantown.
Lardin, Frank Miller,.....Masontown, Pa.
Lewellyn, Elizabeth Valeria,.....California, Pa.
Lewis, Ernest D.,.....Johnstown.
Lively, Henry Shaw,.....Weston.
McConkie, Orie,..... .....Clarksburg.
McCrum, Arlington Bliss,.....Aurora.
McGregor, Frank Herbert.....Cairo.
McMurphy, Jerome Case,.....Oak Park, Ills.
Meyers, Howard Melchior,.....Bramwell.
Meyers, Walter Howard,.....Shepherdstown.
Miller, Gilbert Benton,.....Kearneysville.
Miller, Alex. McVeigh, Jr.,.....Alderson.
Miller, Irene,..... .....Alderson.
Miller, Jacob Franks,.....Oldframe, Pa.
Moreland, James Rogers,.....Morgantown.
Neely, Matthew Mansfield,.....Smithton.
Norris, Rebecca Lupton,.....Glenville.
Russell, Grace Lilian,.....Skowhegan, Maine.
Rogers, Harold Frantz,.....Moundsville.
Shaffer, Phil Anderson,.....Martinsburg.
Shriver, Ross Chalfant,.....Wadestown.
Shuttleworth, Benj. Franklin, Jr.,.....Clarksburg.
Smith, William Winfred,.....Ceredo.
Somerset, Margaret Faith,.....Bridgeport, Conn.
Stalnaker, Edward Stuart,.....Martinsburg.
Stathers, Madison..... .....Alma.
St. Clair, Harry Alonzo,.....Jaco.
Vannoy, John Dexter,.....Morgantown.

Whitham, Geo. Robins,.....Morgantown.
Willey, Chauncey DeWitt,.....Morgantown.
—53

Juniors.

Alexander, Clyde,.....Morgantown.
Bayle, Samuel Brecht,.....Waterford, Pa.
Berkeley, Fanny Campbell,.....Morgantown.
Bitner, Leila Henkle,.....Kearneysville.
Bowman, Frank Lewellen,.....Charleroi, Pa.
Boyd, Robert Hanson,.....Martinsburg.
Brown, Robert Morrow,.....New Cumberland.
Casto, Dorr Clayton,.....Parkersburg.
Cobun, Linnie Belle,.....Morgantown.
Duval, Harding LeMoyne,.....Wellsburg.
Freshwater, Philip.....Penrith.
Green, Robert Rodman,.....Morgantown.
Herod, Francis Clyde,.....Dunkard, Pa.
Keener, Hayes Harold,.....Waynesburg, Pa.
Loeb, Leo,.....Charleston.
Miller, Dwight, Edmund,.....Morgantown.
Miller, Frances Livermore,.....Monongah.
Miller, Lawrence Paxton,.....Alderson.
Morris, Lila Kemble,.....Charleston.
Morris, Hortense,.....Harrisvile.
Muldoon, John Dement,.....Wheeling.
Parsons, Wm. Ewin,.....Morgantown.
Provence, Leana Hague,.....Masontown, Pa.
Richards, Edgar Ulysses,.....New Cumberland.
Robinson, Delbert Thomas,.....Grafton.
Sanders, Mary Virginia,.....Maidsville.
Schissler, John Hoffman,.....Morgantown.
Sennett, Maude Savilla,.....Morgantown.
Shloss, Sidney,.....Morgantown.
Stalnaker, Elizabeth Mattingly,.....Martinsburg.
Taylor, Ernie Pearle,.....Morgantown.
Watkins, Wm. Merle,.....Grafton.
Waugh, Frences Belle,.....Wellsburg.
Wertz, Enda Earle,.....Huntington.
Yager, Mary Louise,.....Wheeling.
—35

Sophomores.

Allen, Horace Darwin,.....Ridersville.
Bumgardner, William Michael,.....Elk Lick, Pa.
Beall, Clarence Hough,.....Morgantown.
Bennett, Lawrence Edward,.....Ireland.

Boutwell, Louis Eugene,.....Cherry Creek, N. Y.
Collett, Albert Jackson,.....Beverly.
Conaway, Oran B.,.....Alma.
Coplin, Mary,.....Boothsville.
Cooke, Jean Valjean,.....Morgantown.
Corbin, Blanche,.....Fairmont.
Cox, Boaz Baxter,.....Morgantown.
Crago, Eva Laura,.....Wheeling
Craig, Georgia Phillips,.....Shippensburg, Pa.
Dawley, Beulah,.....Silver Creek, N. Y
Dawson, Daniel,.....Charleston.
Hervey, Henry Jacob,.....Morgantown.
Hill, T. Getz,.....Morgantown.
Jackson, Jas. Henry,.....Jane Lew.
Jones, Bettie Cooke,.....Morgantown.
Koonce, Darrell Kenneth,.....Halltown.
Kunst, Frank Batson,.....Pruntytown.
Largent, Robert Joseph,.....Paw Paw.
Lawrence, Benj. Franklin.....Bluefield.
Leech, Fannie May,.....Morgantown.
McKinney, Jane Etta,.....Fairmont.
Morris, Tusca,.....Metz.
O'Neill, Harry Francis,.....Pittsburg, Pa.
Peck, Herbert Cromwell,.....Philippi.
Potts, Emma Margaret,.....Huntington.
Proeger, Minnie,.....Greensburg, Pa.
Rhoades, Geo. Carroll,.....Dallas.
Richards, Frederick Franklin,.....New Cumberland.
Shaw, Wm. Roy,.....Terra Alta.
Shelford, Victor Ernest,.....Chemung, N. Y.
Theodoroff, Meroslav Geo. Pope,.....Morgantown.
Trapnell, Richard Watkins,.....Charles Town.
Whitehill, Elizabeth Wilson,.....Morgantown.
Wilson, Virginia Farragut.....Morgantown.
Wood, Florence Arnold,.....Morgantown.
Yoke, Frank Roy,.....Morgantown.
—40

Freshmen.

Adkins, Asa Williams,.....Huntington.
Albig, Wm. Espey,.....Scottdale, Pa.
Auvil, Jesse Herbert,.....Iaeger.
Bumgardner, Alberta Caroline,.....Elk Lick, Pa.
Bowman, Thos. Armstead Bradford,.....Valley Furnace.
Brady, James Benjamin,.....Berkeley Springs.
Brown, Elery Clark,.....Gladesville.

Buchanan, Joseph Kerr,.....Morgantown.
Bullock, Edgar,.....Penn Yan, N. Y.
Burns, Laviga Washington,.....Meadow Bluff.
Colbert, Ada Rebecca,.....Martinsburg.
Cole, Lora Sophia,.....Morgantown.
Cummins, John William,.....Wheeling.
Cutts, Hattie,.....Montgomery.
Egbert, Ella Elizabeth,.....North Hector, N. Y.
Dent, Herbert Warder,.....Grafton.
Dornan, Wm. Gibson,.....New Cumberland.
Dunbar, Jesse Tuckwiller,.....Lewisburg.
Duke, Walter McGarry,.....Bakerton.
Embleton, Tennyson LeMoyne,.....Charleston.
Hall, Emily Elizabeth,.....Keyser.
Hall, Estella,.....Morgantown.
Harr, Levi Brooks,.....Fairmont.
Herd, Chas. Thomas,.....Morgantown.
Hodges, Warren Hampton,.....Morgantown.
Hughes, Rector Romeo,.....Spencer.
Kendrick, William Henry,.....Morgantown.
Kincade, Cora Eleanor,.....Point Pleasant.
Marrs, Leola Ethel,.....Huntington.
Martin, Nella,.....Parkersburg.
McCullough, Wm. Turner,.....Charleroi, Pa.
McIntosh, Elizabeth Orr,.....Parkersburg.
McMillen, Russell Hennen,.....Masontown.
McMillen, Julius Ray,.....Masontown.
Moore, Solomon Granville,.....Belington.
Parsons, Delos Emmons,.....Huntington.
Reinhart, Chas. Hugh,.....Shepherdstown.
Sanders, Helen Maud,.....Maidsville.
Scott, Wm. Emmett,.....Lewisburg.
Smith, Bertha Jane,.....Sistersville.
Snyder, Louis Clarke,.....Morgantown.
Tapp, Elizabeth Louise,.....Morgantown.
Watson, Clyde Emil,.....Kingwood.
Wayt, Wm. Henry.....Fanlight.
Wilson, Mary Brent,.....Morgantown.
Wright, Mattie,.....Uniontown, Pa.

—46

Premedical Students.

Bonar, Wm. Porter,.....Glen Easton.
Conaway, Benj. Franklin,.....Mannington.
Cooper, Frank Scott,.....Red Star.
Cox, Hugh Workman,.....Morgantown.

Downey, John Otho,.....Martinsburg.
Hayes, Russell Alexander,.....Morgantown.
Lilly, Milton Judson,.....Dunn's.
Mitchell, Ralph Cadwallader,.....Glade Farms.
Moore, Phoebia,.....Mannington.
Orris, Chas. Sumner,.....Elkins.
Pemberton, Edward Milton,.....Charleston.
Richards, Dellroy,.....New Cumberland.
Ridenour, Dora,.....Clarksburg.
Scott, Stanhope McClellan,.....Terra Alta.
Steele, Harry Geo.,.....Keystone.
—15

Special Students.

Aggleson, Agnes Irene,.....Davis.
Allender, Bernardine Blanche.....Grafton.
Ashburn, Oliver Alvedore,.....West Union.
Atkeson, Mary Meek,.....Buffalo.
Baird, Jameszetta,.....Wheeling.
Baker, Rosa,.....Rouseville, Pa.
Bambrick, Edna Daisy, ...New Cumberland.
Baxter, Ruth,.....Fairview.
Bowers, John Hugh,.....Brushy Run.
Bradley, May Belle,.....Masontown, Pa.
Brown, David Andrew,.....Hickory, Pa.
Brown, Florence Ethel .....Holman.
Brown, Lucie Sara,.....New Cumberland.
Brugger, Harvey,.....Clyde, Ohio.
Carle, Ethel,.....Eatons.
Carman, Oliver Orlando,.....Turtle Creek, Pa.
Carr, Mrs. Ange Hollister,.....New York, N. Y.
Chambers, Harriet Eva,.....New Cumberland.
Cole, Amor Bruce,.....Simpson.
Colebank, Lawrence Washington,.....Clarksburg.
Collett, Sue Wilson,.....Beverly.
Cooke, Mrs. Elizabeth Beatrice,.....Morgantown.
Copeland, Mrs. Ethel Faulkner,.....Morgantown.
Deusenberry, Iona May,.....Morgantown.
Dotson, James Porter,.....Cairo.
Douthat, Dana Glenn,.....Morgantown.
Fuller, Charles LaFayette,.....Franklinville, N. Y.
Gilmore, Mattie Emerson,.....Bridgeport, Conn.
Grant, H. Elizabeth,.....Morgantown.
Grant, Edith Mary,.....Morgantown.
Green, Bessie Thomas,.....Delaplane, Va.
Grimes, James Lee,.....Pittsburgh, Pa.

Guy, Robert Emmet,.....Lewisburg.
Hackney, Blanche,.....Morgantown.
Hagan, Dora Estelle,.....Huntington.
Harvey, William,.....Frostburg, Md.
Hayes, Jeannette Clement,.....Morgantown.
Hill, Francis McClellan,.....Everson, Pa.
Hopkins, Georgia Louise,.....Morgantown.
Hopkins, Charles Lloyd,.....Lloydsville.
Horner, Annie Rachel,.....Dayton.
Howard, Lester,.....Stanfordville, N. Y.
Hukill, Cora Priscilla,.....Wellsburg.
John, Daisy Belle,.....Morgantown.
Johnson, Agnes Stephenson,.....Morgantown.
Johnson, William Gordon,.....Morgantown.
Johnston, Maude Syphers,.....Pentress.
Johnson, Annie Ballon,.....Morgantown.
Johnson, Charity Nelson,.....Bridgeport.
Jones, George Robinson,.....Wheeling.
Keener, Beulah Blanche,.....Morgantown.
Kendall, Ramer Oscar,.....Mannington.
Knotts, William Clark,.....Dunkard, Pa.
Kortright, Mrs. Flora,.....Morgantown.
Lewis, Mary Agnes,.....Valley Grove.
Lewis, James Chambers,.....Valley Grove.
Lewis, Fred,.....Glenville.
Lovett, Harold Hampton,.....Albert.
Lowe, Rhoda L.,.....Shinnston.
Martin, William Huston,.....Perryopolis, Pa.
McBride, Douglass Laurie Banks,.....Washington, D. C.
McDermott, Joseph Henry,.....Morgantown.
McGrew, Julia,.....Morgantown.
Michael, Coleman Luke,.....Fairmont.
Miller, Mary Catharine,.....Wheeling.
Morgan, Jessie Leigh,.....Gans Station, Pa.
Morgan, Lily Sarah,.....Rivesville.
Myers, Jeremiah Cicero,.....Moore.
Nutter, Bessie,.....Oxford.
Phillips, John Nelson,.....Utica, Montana.
Phillips, Albert William,.....Utica, Montana.
Prichard, John Guy,.....Rivesville.
Printz, Benjamin G.,.....Morgantown.
Radcliffe, Count Lee,.....Wheeling.
Smith, David Hamilton,.....Mt. Carbon.
Smith, Earl Harry,.....Fairmont.
Stewart, Jane,.....Fairview.
Tait, Sara Cope,.....Morgantown.

Taylor, Florence Naomi,.....Holliday's Cove.
Thayer, Mrs. A. E.,.....Morgantown.
Thomas, Mary Eleanor.....Bula.
Turner, Bird Margaret,.....Moundsville.
Turner, Edgar Duncan,.....Morgantown.
Turner, Grace Baldwin,.....Morgantown.
Turrell, Marion Charles,.....New Castle, Pa.
Twigg, Ida Blanche,.....Davis.
Twigg, Wilbur Wisingford,.....Davis.
Utt, Oranna Ellen,.....Morgantown.
Wertz, William Wesley,.....Charleston.
White, Nell Morhead,.....Morgantown.
Whitham, Mary,.....Valley Grove.
Wiles, Nicketie Buchanan,.....Spaulding.
Wilson, Ben. K.,.....Huffman.
Wilson, Harry E.,.....Viola.
Wilson, Mary Augusta,.....Morgantown.
Wiren, Aurora,.....Minneapolis, Minn.
Wiren, Frances,.....Minneapolis, Minn.
Woodward, Katie,.....Charleston.
—100

The College of Engineering and Mechanic Arts.

Seniors.

Burk, Fred Ross,.....C.E.....Pittsburg, Pa.
Burns, Dana Blackburn,.....C.E. .....Morgantown.
Eakin, John Ross,.....C.E.....New Martinsville.
Hennen, Ray Vernon,.....C.E.....St. Cloud.
Holland, Walter Forse,.....C.E. .....Morgantown.
Ireland, Emory Ison,.....C.E. .....Whiteoak.
Lang, Thos. Simeon,.....C.E. .....Bridgeport.
Ross, John Gilmore,.....C.E. .....Morgantown.
Six, Wm. Louis,.....C.E. .....Wadestown.
Yoho, Robert Calvin,.....C.E.....Rosby's Rock.
—10

Juniors.

Bayles, Geo. Harmon,.....C.E. .....Easton.
Hutchinson, Frank David,.....C.E. .....Keyser.
Killingsworth, Richard Huffman,.....C.E. .....Trubada.
Muldoon, Frank Walker,.....M.E. .....Morgantown.
Rogers, Ralph,.....M.E. .....Morgantown.
Swallow, Walter Ambrose,.....C.E. .....Pittsburg.
Tabler, Ernest Corban,.....C.E. .....Martinsburg.
—7

Sophomores.

Christy, Cyrus Moats,.....C.E.....Belmont, Pa.
Cole, Emmert Luther,.....C.E. .....Morgantown.
Gibson, Wm. Herbert,.....C.E. .....Tunnelton.
Howe, Jas. Vance,.....C.E. .....Morgantown.
Lewis, John Clyde,.....C.E. .....Gratton.
Lucas, Arthur Mapel,.....C.E. .....Morgantown.
Maxwell, Earl Cook,.....C.E. .....Wheeling.
Moore, Charles Larkin,.....C.E.....Brownsville, Pa.
Nelson, Martin Emmet,.....C.E. .....Halleck.
Patton, Benj. Franklin,.....C.E. .....Harrisville.
Robinson, Carel,.....C.E. .....Charleston.
—11

Freshmen.

Alexander, Wm. Frank,.....M.E. .....Mannington.
Ballard, Walter Philip,.....M.E. .....Fullen.
Brannon, Earl Holt,.....C.E. .....Glenville.
Leonard, Frank O.,.....C.E. .....Buckhannon.
Smith, Robley Tom,.....M.E. .....Weston.
Snyder, Earl Bailie,.....C.E.....Uniontown, Pa.
Sperow, Brown Ferdinand,.....C.E. .....Hedgesville.
—7

Special Students.

Core, Geo. Johnson,.....C.E. .....Core.
Crawford, Stuart Robson,.....C.E.....Ansted.
Hallock, Albert Gibbs,.....C.E. .....Wheeling.
Henritze, Benson,.....M.E. .....Welch.
Milligan, William George,.....C.E. .....Wheeling.
Wotring, Felton Hall,.....M.E. .....Morgantown.
—6

The College of Agriculture.

Graduate Students.

Atkeson, Thomas Zephaniah, Buffalo.
B.Agr., West Virginia University, 1899; B.S., ibid., 1900.

Johnson, Thomas Carskadon, Morgantown.
B.S.Agr., West Virginia University, 1896; A.M., ibid., 1900.

Naret, Wm. Frazier, Paw Paw.
B.Agr., West Virginia University, 1898; B.S.Agr., ibid., 1899; A.M., ibid., 1900.

Pollock, William McCally, Morgantown.
A.B., West Virginia University, 1899.

— 4

Seniors.

Correll, Harry Davis,.....A.B. .....Lewisburg.
Jones, Elbert,..... B.Agr. .....Rivesville.
—2

Sophomores.

Atkeson, Karl Clark,.....B.Agr. .....Buffalo.
Click, Andrew Leopold,.....B.Agr. .....Cottageville.
—2

Freshmen.

Arthur, Theodore Joseph,.....B.Agr. .....Reedsville.
Babb, Samuel Melvin,.....B.Agr. .....Falls.
Babb, Haven Chester,.....B.Agr. .....Medley.
Ellison, Addison Dunlap,.....B.Agr. .....Greenville.
—4

Special Students.

Atkeson, Mary Meek,.....Buffalo.
Bonar, John Stanley,.....Cameron.
Bloom, A. R.,.....Pt. Pleasant.
Blose, Chas. Walton,.....Delmont, Pa.
Bowman, Thos. Armstead Bradford,.....Valley Furnace.
Burns, Laviga Washington,.....Meadow Bluff.
Cartright, Walter C.,.....Logansport.
Cowan, Elsie Morgan,.....Morgantown.
Ellison, Clarence P.,.....Greenville.
Fairfax, Ralph Bernard,.....Reedsville.
Freed, Arthur Preston,.....New Haven, Pa.
Kunst, Frank Batson,.....Pruntytown.
LeFevre, Edgar Brown,.....Bunker Hill.
Michael, Coleman Luther,.....Mannington.
Michael, Ande Meredith,.....Mannington.
Morgan, Rembrandt,.....Poca.
Pemberton, Edward M.,.....Charleston.
Phillips, Clarence A.,.....Loudensville.
Rightmire, Byron Wesley,.....Morgantown.
Rhoades, Horner Heavener,.....Lightburn.
Sterrett, Robert,.....Buhalo.
Vossler, C. E.,.....Maysville.
Walton, Wm. Karl,.....Cameron.
Winans, Geo. Clarke,.....Washington, D. C.
—24

The College of Law.

Seniors.

Beltzhoover, Geo. Morris, Jr., ... LL.B. ..... Shepherdstown.
A.B., West Virginia University, 1900.
Bland, Robert, ... C. ..... Blandville.
Bowman, William Byrne, ... C. ..... Rowlesburg.
Brown, Albert Gallatin, ... C. ..... Worley.
Butler, Seaton Garland, ... C. ..... Parkersburg.
Cason, Philip Alonzo, ... C. ..... Rockville, Md.
Chapman, Alexander Campbell, ... LL.B. ... West Alexander, Pa.
B. S., Bethany College, 1898.
Christner, Braden Hurst, ... C. ..... Moyer, Pa.
Cochran, Wm. Lynn, ... C. ..... St. Albans.
Corbin, Frank Pickering, ... LL.B. ..... Ellenboro.
Craig, Arden Llewellyn, ... C. ..... Summersville.
Crockett, Geo. Peery, ... C. ..... Bluefield.
Cutright, Lyman, ... C. ..... Sago.
Dailey, Jas. Thomas, ... LL.B. ..... Buckhannon.
File, Ashton, Jr., ... C. ..... Mt. Hope.
Friedberg, Joseph, ... C. ..... Uniontown, Pa.
Harper, Jacob Milton, ... C. ..... Spencer.
Hendrick, Thos. Wm., ... C. ..... Plum Branch, Va.
Hodges, Milton Stanley, ... LL.B. ..... Keyser.
A.B., Ohio Wesleyan University, 1899.
Hoff, Silas Marion, ... LL.B. ..... Auburn.
A.M., West Virginia University, 1900.
Ice, Elias Clark, ... C. ..... Mannington.
King, D. Harlan, ... LL.B ..... Vineland, N. J.
A.B., Waynesburg College, 1899.
Koonce, Darrell Kenneth, ... C. ..... Halltown.
Laing, Thos. Kay, ... LL.B. ..... Sun.
A.B., Hampden-Sidney College, 1899.
Lehman, John Lee, ... C. ..... Fairmont.
Leonard, Daniel Blake, ... C. ..... Parkersburg.
Long, Ed. Leslie, ... C. ..... Alma.
Maxwell, Haymond, ... LL.B, ... Clarksburg.
A.B.. West Virginia University, 1900.
McCrum, Arlington Bliss, ... LL.B. ..... Aurora.
McGlumphy, Walter Alexander, ... LL.B. ..... Rocklick.
A.B.. West Virginia University, 1900.
McGregor, Frank Herbert, ... LL.B. ..... Cairo.
McVey, Elmo, ... C. ..... Fayetteville.
McWhorter, Charles Nathan, ... LL.B. ..... Lewisburg.

Musgrave, Frederick Gerald,.....C.....Pt. Pleasant.
Powell, Samuel Alfred,.....C. .....Morgantown.
Pownall, Thos. Edwin,.....C. .....Rio.
Ramsey, Robert L.,.....C.....New Cumberland.
Sayre, Harold Ross,.....C.....New Martinsville.
Stewart, Terrence D.,.....C. .....Charleston.
Tiernan, John Holt,.....C. .....Wayne.
Townsend, Tom Chasteene,.....C. .....Fayetteville.
Tustin, Valentine Tilden,.....C. .....Wadestown.
White, Kemble,.....LL.B. .....Matewan.
A.B., West Virginia University, 1894.
Willey, Chauncey DeWitt,.....LL.B. .....Morgantown.
Woddell, William L.,.....C. .....Addison.
Wolverton, John Marshall,.....C.....Big Bend.
—46

Juniors.

Archer, Lewis Danford,.....C. .....Georgia.
Armstrong, Wm. Lee,.....C. .....Sutton.
Barnhart, Wm. Gray,.....C.....Red House.
Boyd, Theopholus Sutton,.....LL.B.....Scottdale, Pa.
Brant, William Hyacinth,.....C. .....Waynesburg.
Burchinal, Ira Grant,..... C. .....Smithfield, Pa.
Casto, Dorr Clayton,..... LL.B. .....Parkersburg.
Cooke, Fieldon Clarke,.....C. .....Norwood.
Conway, Wickliffe M.,.....LL.B. .....Bristol.
Ph.B., Albion College, 1897.
Cuppett, David Earl,.....C.....Glade Farms.
Eddy, Levi Thomas,.....C.....Brave, Pa.
Enslow, Frank,.....C. .....Huntington.
Held, Charles Wm.,.....C.....Towson, Md.
Hughes, Alvaroe Glenn,.....LL.B. .....Ravenswood.
A.B., West Virginia University, 1900.
Iams, Frank Victor,.....C.....Waynesburg, Pa.
John, Wm. Scott,.....LL.B.....Rosedale, Pa.
A.B., West Virginia University, 1900.
Means, Thos. Hollander,.....C.....Percy, Pa.
McIntire, Thayer Melvin,.....C.....New Martinsville.
Morris, Tusca,.....LL.B. .....Metz.
Patterson, George,.....C.....Percy, Pa.
Pendleton, John Randolph,.....C. .....Ingleside.
Powell, Michael,.....C. .....Blacksville.
Sperry, Clarence B.,.....C. .....Clarksburg.
Snodgrass, John Glen,.....C.....New Martinsville.
Somerville, George Greene.....C. .....Clifton.
Stone, Jas. Frederick,.....C.....Pt. Pleasant.

Stump, Charles Wilbur,..... LL.B. .....Charleston.
Withers, Horace,.....C. .....Buckhannon.
Yost, Ervin Henry,.....C.....New Martinsville.
—29

Special Students.

Anthony, John Wilbur,.....Jeannette, Pa.
Armstrong, Gideon Byrne,.....Sutton.
Bond, Edwin Sortorus,.....Horton.
Bowen, Samuel Edwin,..... .....Charleston.
Callaghan, Dennis Milton,.....Beaver.
Cooley, Geo. Walker,.....Strasburg, Va.
Farmer, Chas. S.,.....New Martinsville.
Greene, Chas. Francis,.....Confluence.
Grooms, Robert Arthur,.....Gerardstown.
Hall, Chas. Leonard,.....New Martinsville.
Hall, Clark Leslie,.....Charlotte.
Hepburn, Nannie Katherine,.....Piedmont.
Hobbs, Henry Clifton,.....Lexington, Va.
Houston, Harold Wilkins,.....Parkersburg.
Keener, John Burton,.....Braddock, Pa.
Kenna, Edward Benninghaus,.....Charleston.
Keifer, Walter Bee,.....Sistersville.
Moran, Henry Eldorah,.....Frisco.
Morris, William E.,.....Clarksburg.
Moore, Sheridan,..... .....Wheeling.
Nash, Robert Alin, Jr.,.....Ravenswood.
Newcomer, Frank Coldern,.....High House, Pa.
Pierce, Carleton Custer,.....Rowlesburg.
Piles, Adolpha Allen,.....Newburg.
Postlethwait, Wm. Jackson,.....New Martinsville.
Shriver, John,..... .....Morgantown.
Singhass, Walter F.,.....Springfield.
Smith, Lewis Oscar,.....Plum.
Snee, William Jefferson..... ....Epton, Pa.
Snyder, D. W., Jr.,.....Falling Waters.
Sutton, Felix Oren,.....Flatwoods.
LL.B., Southern Normal University, 1900.
Sutton, Oley Ord,.....Flatwoods.
LL.B., Southern Normal University, 1900.
Thornton, Woody Anster,.....Morgantown.
Williams, Homer W.,.....Brown.
York, Arthur Blaine,.....Yorkville.
—35

The School of Music.

Piano.

Baird, Hallie Adella,.....Elm Grove.
Bannister, Mary,.....Morgantown.
Barthlow, Maude Viola,.....Morgantown.
Bell, Winnie,.....Bula.
Bennett, Sara Ann,.....Morgantown.
Bittle, Mona Alethea,.....Morgantown.
Brown, Florence Ethel,.....Holman.
Brown, Lucie Sara,.....New Cumberland.
Burns, Evalyn Sage,.....Morgantown.
Burns, Mary Hogues,.....Morgantown.
Colbert, Ada Rebecca,.....Martinsburg.
Collett, Sue Wilson,.....Beverly.
Copeland, Ethel Faulkner,.....Morgantown.
Courtney, Crystal,.....Randall.
Core, Mertie Otelia,.....Morgantown.
Crowe, Josiah Benton,.....McClellandstown, Pa.
Crumrine, Rhoda,.....Morgantown.
Cushman, Della Leora,.....Brownsville, Pa.
Davis, Bessie Belle,.....Morgantown.
Dering, Grace Enzy,.....Morgantown.
Dotts, Malvern Modena,.....Pennsboro.
Ferrell, Bessie,.....Burnt House.
Fravel, Mary Stewart,.....Poca.
Friend, Gertrude May,.....Morgantown.
Garlow, Sadie Ruth,.....Rosedale, Pa.
Gilmore, Maud,.....Morgantown.
Green, Ethel Averill,.....Morgantown.
Gregg, Bessie Lee,.....Morgantown.
Gregg, Lucile C.,.....Morgantown.
Hackney, Blanche,.....Morgantown.
Hagan, Dora Estelle,.....Huntington.
Hall, Marguerite Spragg,.....Morgantown.
Hall, Emily Elizabeth,.....Keyser.
Hayes, Flora Ray,.....Morgantown.
Hayes, Jeannette Clements,.....Morgantown.
Heath, Lola Blanche,.....Oldframe, Pa.
Heermans, Florence,.....Morgantown.
Herd, Virginia,.....Morgantown.
Hervey, Henry Jacob,.....Morgantown.
Hess, Queen Pearl,.....Upper Middletown, Pa.
Hite, Evelyn Pratt,.....Morgantown.

Hodges, Olive Ireland,.....Morgantown.
Houston, Ada Virginia,.....Morgantown.
Howe, Rosalie Boughner,.....Morgantown.
Jamison, Gillian,..... .....Morgantown.
Johnson, Belle Wade,.....Morgantown.
Johnston, Maude Syphers,.....Prentess.
Jones, Elta Blanche,.....Morgantown.
Keener, Beulah Blanche,.....Morgantown.
Koontz, Lola Gertrude,.....Kessler's Cross Lanes.
Kunst, Chas. Frederick Wm.,.....Pruntytown.
Layton, Lulu Eugenie,.....Morgantown.
Lazzelle, Nora Jackson,.....Morgantown.
MacDowell, Annie Winona,.....Uniontown, Pa.
Martin, Nella,..... .....Parkersburg.
McBride, Marguerite,.....Washington, D. C.
Morris, Mary,..... .....Casville.
Norris, Edna,..... .....Littleton.
Moore, Lucile,.....Van Voorhis.
Pomroy, Gertrude May,.....Morgantown.
Price, Georgia Eloise,.....Morgantown.
Price, Katharyn,.....Rice's Landing.
Protzman, Blanche,..... .....Morgantown.
Reed, Mary Ella,.....Morgantown.
Reiner, Eva Mendora,.....Easton.
Reppert, Alta Gay,.....Easton.
Rodgers, Anna Rebecca,.....Morgantown.
Ross, Minerva Emma,.....Simpson.
Ruble, Anna,.....Fairchance, Pa.
Sadler, Zella,.....Pt. Marion, Pa.
Shallcross, Mary Allison,.....Morgantown.
Smith, Bertha Jane,.....Sistersville.
Smith, Isa Blaine,.....Morgantown.
Tait, Sara Cope,.....Morgantown.
Tapp, Elizabeth Louise,.....Morgantown.
Thayer, May Cahoone,.....Morgantown.
Turner, Mary Rebecca,.....Morgantown.
Walker, Carla Roome,.....Fairmont.
Ward, Emma,.....Lee Bell.
Watson, Elizabeth Crane,.....Fairmont.
Waugh, Frances Belle,.....Wellsburg.
Weaver, Mabel J.,.....Morgantown.
Werner, Emma Jean,.....Morgantown.
Whitehill, Anna Wilson,.....Morgantown.
Whitehill, Elizabeth Wilson,.....Morgantown.

—85

Guitar.

Allender, Blanche Bernardine,.....Grafton.
Barthlow, Maud,.....Morgantown.
Baumgardner, Wm. Michael,.....Morgantown.
Capehart, Jessie,.....Morgantown.
Dotts, Malvern Modena,.....Pennsboro.
Jones, Bettie Cook,.....Morgantown.
Miller, Louise Ansley,.....Wellsburg.
Morris, Mary,.....Cassville.
Rhoades, Geo. Carroll,.....Dallas.
Ross, Cora Belle,.....Simpson.
Smith, Isa Blaine,.....Morgantown.
Steele, Frank Bailey,.....Keystone.
Turner, Edgar Duncan,.....Morgantown.
—13

Mandolin.

Fast, Richard Raymond,.....Morgantown.
Gibson, Clay Ashbel,.....Tunnelton.
Hill, Francis McClellan,.....Everson, Pa.
Johnson, Ralph Stephens,.....Morgantown.
Lorentz, Percy Devaul,.....Berkeley Springs.
McBride, Douglas Laurie Banks,.....Washington, D. C.
Ross, Charles Fordice,.....Simpson.
Stump, Chas. Wilbur,.....Charleston.
—8

Banjo.

Christen, Albert Guy,.....Morgantown.
Turner, Grace Baldwin,.....Morgantown.
—2

Clairionet.

Burns, Mary Hogues,.....Morgantown.
Crago, Ray Cornelius,.....Dearth, Pa.
—2

Harmony.

Dotts, Malvern Modena,.....Pennsboro.
Gregg, Bessie Lee,.....Morgantown.
Hayes, Flora Ray,.....Morgantown.
Houston, Ada Virginia,.....Morgantown.
Howe, Rosalie Boughner,.....Morgantown.
MacDowell, Annie Winona,.....Uniontown, Pa.
Norris, Edna Vernus,.....Littleton.
Ruble, Anna,.....Fairchance, Pa.
Shane, Bess Dorrance,.....Steubenville, Ohio.
Sadler, Zella,.....Pt. Marion, Pa.
Smith, Bertha Jane,.....Sistersville.
—11

Organ.

Hess, Ora Elizabeth,.....Morgantown.
Layman, Capitola,.....Fairmont.
Martin, Grace,.....Morgantown.
Miller, Frances Livermore,.....Morgantown.
Shane, Bess Dorrance,.....Steubenville, Ohio.
—5

Violin.

Atkeson, Mary Meek,.....Morgantown.
Boyles, Nirth Morrell,.....Morgantown.
Cobun, Alice,.....Morgantown.
Crumrine, Martha Irene,.....Morgantown.
Furman, Cecil,.....Morgantown.
Hoffman, John Henry,.....Morgantown.
Howard, Lester,.....Standfordville, N. Y.
Lodge, John Duncan,.....Bridgeport.
Parker, Goldie Love,.....Morgantown.
Ross, Justus J.,.....Simpson.
Schroeder, Katrina,.....Morgantown.
Schmidt, Frederick,.....Morgantown.
Somerville, John Ferguson,.....Farmington.
—13

Summary.

Piano,.....	85
Guitar,.....	13
Mandolin, ...	8
Banjo,.....	2
Clarionet,.....	2
Harmony,.....	11
Organ,.....	5
Violin,.....	13
Total,.....	139

The Commercial School.

Adamson, Estelle Greenlee,.....Morgantown.
Alexander, J. L.,.....Fort Spring.
Armstrong, Mary Louisa,.....Morgantown.
Babb, S. M.,.....Falls.
Baird, Jamezetta,.....Wheeling.
Baker, Ellice,.....Parson.
Bartlett, Goedecke M.,.....Simpson.
Beall, Clarence,.....Morgantown.

Beeman, Selena Cordova,.....Smock, Pa.
Bell, Winnie,..... .....Bula.
Beltzhoover, George,..... .....Shepherdstown.
Blose, Charles Walton,.....Delmont, Pa.
Bloom, A. R.,.....Pt. Pleasant.
Bradley, Mary Estelle,.....Masontown, Pa.
Bradley, May Bell,.....Masontown, Pa.
Brown, Lucy L.,.....Morgantown.
Brown, E. C.,.....Gladesville.
Bucher, J. W.,.....Liverpool, Ohio.
Burnside, Marshall,..... .....Burdette.
Burson, Adda Rebecca,.....Evelyn.
Carman, Earl Park,.....New Cumberland.
Carman, Earnest Clark,.....New Cumberland.
Carman, O. O.,.....Turtle Creek, Pa.
Carskadon, Edward B.,.....Keyser.
Cartright, Walter C.,.....Logansport.
Cason, P. A.,.....Rockville, Md.
Callison, James H.,.....Leivasy.
Christner, Braden Hurst,.....Moyer, Pa.
Chambers, James W.,.....New Cumberland.
Coda, J. G.,.....Charlotte.
Conn, George J.,.....Uniontown, Pa.
Conn, L. S.,.....Uniontown, Pa.
Core, J. L.,.....Morgantown.
Core, L. S.,.....Morgantown.
Corbin, W. H.,.....Ellenboro.
Cowan, Elsie Morgan,.....Morgantown.
Crowe, J. B.,.....McClellandstown, Pa.
Davis, James W.,.....Everson, Pa.
Davis, Roy George,.....Morgantown.
De Gardyne, William,..... .....Pt. Marion, Pa.
Dotson, James Porter,.....Cairo.
Duggan, W. A.,.....Benwood.
Finnell, V. C.,.....Morgantown.
Fortney, J. M. C.,.....Gladesville.
Forquer, J. C. M.,.....Brandonville.
Garrison, Olive,..... .....Morgantown.
Gibson, Charles A.,.....Tunnelton.
Groves, Aletha,..... .....Kessler's Cross Lanes.
Hagan, Dora E.,.....Huntington.
Hall, C. L.,.....New Martinsville.
Hart, Gertrude.....Paisley, Pa.
Harvey, Wm.,.....Frostburg, Md.
Hartley, G. S.,.....Liverpool.
Hayes, Camille, ...Morgantown.

Hess, Phila,.....Buckhannon.
Henderson, J. S.,.....McKeesport, Pa.
Hopkins, E. B.,.....Morgantown.
Hopwood, M. O.,.....Brandonville.
Hoover, Geo. P.,.....McClellandstown, Pa.
Hodges, W. H.,.....Morgantown.
Hornor, Annie L.,.....Dayton.
Hukill, Cora,.....Wellsburg.
Ice, E. Clarence,.....Mannington.
Jennings, Maude Katheryne,.....Morgantown.
John, William S.,.....Rosedale, Pa.
Johnson, W. G.,.....Morgantown.
Johnson, Maude,.....Pentress.
Jones, Elbert,.....Rivesville.
Jones, W. B.,.....Mole Hill.
Kendall, R. O.,.....Mannington.
Kincaid, Lida,.....Morgantown.
Kirk, Earl Monroe,.....Masontown.
Knotts, W. C.,.....Dunkard, Pa.
Kortright, Mrs. F. L.,.....Morgantown.
Koblegard, Robt. R.,.....Clarksburg.
Koonce, D. K.,.....Halltown.
Koonst, J. A.,.....Morgantown.
Kunst, Charles F.,.....Pruntytown.
Laing, Thos. Kay,.....Sun.
Lang, W.,.....Fire Creek.
Lorenz, J. M.,.....Ulrichsville, O.
Lorentz, Percy D.,.....Berkeley Springs.
Lough, Myrtie,.....Morgantown.
Madagan, James,.....Morgantown.
Maxwell, H.,.....Clarksburg.
McBee, Alva H.,.....Morgantown.
McBee, J. L.,.....Halleck.
McCormick, Anna,.....Morgantown.
McCrum, A. B.,.....Aurora.
McGlumphy, W. A.,.....Rocklick.
McNeill, C. S.,.....Morgantown.
McNeill, L. B.,.....Morgantown.
Michael, Ande M.,.....Mannington.
Michell, Lewis M.,.....Romney.
Miller, Dana Paul,.....Morgantown.
Miller, Evelyn Gatewood,.....Morgantown.
Morrow, Harry Bishop,.....West Newton, Pa.
Morris, Joseph,.....Stewartstown.
Muldoon, Harry Ross,.....Morgantown.
Muntzing, Henry Edward,.....Maysville.

Murphy, E. E.,.....Maidsville.
Nichol, George Wilbert,.....New Cumberland.
O'Grady, Bessie Lee,.....Stewartstown.
Orris, Charles S.,.....Elkins.
Owen, Mabel Donley,.....Pt. Marion, Pa.
Ownby, Monroe,.....Morgantown.
Ownby, F. W.,.....Morgantown.
Parsons, Frances Ann,.....Morgantown.
Parsons, G. W.,.....Morgantown.
Phillips, Clarence Edward,.....Loudensville.
Pixler, William Walter,.....Morgantown.
Pugh, L. B.,.....Morgantown.
Reese, John,.....Claremont.
Rhodes, Hornor Heavner,.....Lightburn.
Rightmire, Ina,.....Morgantown.
Rightmire, Byron Wesley,.....Morgantown.
Rinehart, C. H.,.....Shepherdstown.
Robe, Anna Lee,.....Morgantown.
Robinson, Carel,.....Charleston.
Rumble, Harry Louden,.....Stewartstown.
Sennett, Nora Belle,.....Morgantown.
Shinn, Catherine,.....Shinnston.
Sine, Ollie W.,.....Blacksville.
Smith, W. W.,.....Ceredo.
Smith, Samuel A.,.....Ceredo.
Smith, James Henry,.....Morgantown.
Smith, D. E.,.....Mole Hill.
Smith, Earl Harry,.....Fairmont.
Snyder, E. B.,.....Uniontown, Pa.
Steele, F. B.,.....Keystone.
Stewart, T. D.,.....Charleston.
Stewart, Myrtle,.....Morgantown.
Sterrett, Robt.,.....Buffalo.
Summerville, J. F.,.....Farmington.
Swindler, G. R.,.....Jaco.
Townsend, I. C.,.....Fayetteville.
Vossler, Clarence Edward,.....Maysville.
Wallace, Jno. B.,.....Morgantown.
Walton, W. K.,.....Cameron.
Ward, Roy,.....Morgantown.
Washburn, L. Carl,.....Webster.
Weirick, G. E.,.....Wellsburg.
Willis, Annarie,.....Bridgeport.
Willis, Jesse Joshua,.....Bridgeport.
Wilson, Augusta Mary,.....Morgantown
Wilson, Virginia F.,.....Morgantown.

Wilson, Georgia Clark,.....Morgantown.
Wilson, O. J.,.....Pennsboro.
Wolf, Jesse Garfield,.....Webster.
Woodward, Mrs. Kate,.....Morgantown.
Woolcock, W. Thomas,.....Edgarton.
Young, Howard A.,.....Weston.
Zinn, Judson Sailor,.....Morgantown.
—154

The Preparatory School.

Fourth Year Students.

Baumgardner, Frank Gilbert Haven,.....Morgantown.
Boyers, Charles Forrest,.....Randall.
Brown, Wm. Thomas, Jr.,.....Grafton.
Carney, Samuel Clyde,.....Littleton.
Casto, Chas. Eeverett,.....Belleville.
Davis, Bruce,.....Maidsville.
Davis, Bessie Belle,.....Morgantown.
DeGardeyn, Wm.,.....Pt. Marion, Pa.
Duggan, Wm. Aloysius,.....Benwood.
Forney, Earle Herbert,.....Bethany.
Gill, Chas. Wesley,.....Spruce Creek, Pa.
Graham, Klein Harrison,.....Piedmont.
Hall, Jesse Spurgin,.....Morgantown.
Hardway, John Ellison,.....Zela.
Harshbarger, Clyde Law,.....Milton.
Haymond, Thos. Wilson, Jr.,.....Bristol.
Hennen, Robert David,.....Morgantown.
Hewitt, Frank Ready,.....Bramwell.
Hill, Clyde Arthur,.....Mt. Harmony.
Hiteshew, Harry Otis,.....Parkersburg.
Johnson, Anna Louise.....Morgantown.
Kunkle, James Harvey,.....Morgantown.
Larew, Jas. Edgar,.....Red Sulphur Springs.
LeFevre, Edgar Brown,.....Bunker Hill.
Lemley, Gilbert Southey,.....Mt. Morris, Pa.
Matics, Hunter Leonard,.....Alderson.
Murphy, Jas. Scott,.....Morgantown.
Neale, Chas. Beall Waggener,.....Point Pleasant.
Parsons, Garrett William,.....Romney.
Parsons, Dickson Ward,.....Morgantown.
Peck, MWood Crim,.....Philippi.
Robinson, Jedidiah Waldo,.....Grafton.
Rodgers, Hazlett MacMillan,.....Wellsburg.
Ross, Justus J.,.....Simpson.

Seamon, Harry,.....Moundsville.
Smith, Samuel Augustus,.....Ceredo.
Thurmond, Walter Rippetoe,.....Thurmond.
Ward, Emma,.....Lee Bell.
Watson, Clyde Emil,.....Kingwood.
Wilson, Ella Virginia,.....Morgantown.
—42

Third Year Students.

Abersold, Samuel Clement,.....New Martinsville.
Brand, Franklin Marion,.....Cassville.
Brown, Roscoe,.....Clarksburg.
Buchanan, Margaret,.....Morgantown.
Bucher, John Wesley,.....Liverpool, Ohio.
Burns, David Fay,.....Morgantown.
Clark, John Wm.,.....Morgantown.
Cole, Odos Oscar,.....Morgantown.
Coleband, George Henry,.....Claude.
Crago, Ray Cornelius,.....Dearth, Pa.
Crow, Charles Sumner,.....Morris X Roads, Pa.
Dille, Maude Evans,.....Morgantown.
Ellison, Charles Alexander,.....Greenville.
Flowers, Frank Earnest,.....Glover Gap.
Forquer, James Clark McGrew,.....Brandonville.
Fravel, Mary Stewart,.....Poca.
Gayzakian, Elisha,.....Tarsus, Asia Minor.
Hall, Hugh Ross,.....Pullman.
Hall, Arthur,.....Grafton.
Hill, Francis M.,.....Everson, Pa.
Jenkins, John Logan,.....New Cumberland.
Kiger, Reuben Alvin,.....Sherrard.
Lantz, Clarence I.,.....Lone Star, Pa.
Leach, William Sumner,.....Benwood.
Ligon, Charles Yancey,.....Clover Lick.
Martin, Paul Heermans,.....Morgantown.
McCormick, E. D.,.....Morgantown.
McFarland, Robert Lee,.....Parkersburg.
Millan, Russell,.....Mannington.
Miller, Dana Paul,.....Morgantown.
Miller, Wayne McCormick,.....Morgantown.
Miller, D. Warren,.....Dilliner, Pa.
Moore, Everett Blaine,.....Orem.
Oliver, Alfred Cookman,.....Morgantown.
Ownby, Frederick Hager,.....Morgantown.
Ownby, Monroe,.....Morgantown.
Patterson, James Clarence,.....Carmichaels, Pa.

Rightmire, Edna,.....Morgantown.
Rogers, D. Ray,.....Jimtown.
Ruble, William Jefferson,.....Ruble, Pa.
Schrader, Henry Maxwell,.....Lubeck.
Taylor, Everett Ray,.....Morgantown.
Umbell, Isaac Walter,.....Glade Farms.
Walton, William Karl,.....Cameron.
Wiant, Harold Dana,.....Parkersburg.
Wilson, John Walker,.....Morgantown.
Wood, George,.....Morgantown.
Wright, Robert V.,.....Uniontown, Pa.
—49

Second Year Students.

Adamson, Estella Greenlee,.....Morgantown.
Ashcraft, William Harrison,.....Triune.
Bailey, Gertrude,.....Morgantown.
Barnes, Fred Nelson,.....Morgantown.
Barrackman, Ross,.....Behler.
Bronson, Wade Hampton,.....Williamson.
Buchanan, John Elwood,.....Dallas.
Burns, Evelyn Sage,.....Morgantown.
Callison, James Henry,.....Leivasy.
Click, Andrew Leopold,.....Cottageville.
Corbin, Emmet Addis,.....Ellenboro.
Ellison, Clarence Petrie,.....Greenville.
Fairfax, Ralph Bernard,.....Reedsville.
Felson, Edward,.....Pt. Pleasant.
Fortney, Willis C.,.....Independence.
Gatewood, Massie Cameron,.....Linwood.
Gibson, Clay Ashbel,.....Tunnelton.
Goldstrom, Abraham,.....McKeesport, Pa.
Graham, Guy Edgar,.....Parkersburg.
Gregg, Bessie Lee,.....Morgantown.
Green, Ethel Averill,.....Morgantown.
Hays, Camille Katherine,.....Morgantown.
Hewitt, John D., Jr.,.....Bramwell.
Hopkins, Edwin Butcher,.....Morgantown.
Hopkins, Roy Samuel,.....Morgantown.
Jackson, Stephen Goodloe.....Jane Lew.
Kauffeld, Herman George Adolph,.....Moundsville.
Koblegard, Robert Rankin,.....Clarksburg.
Koontz, James Andrew,.....Morgantown.
Lantz, James Morris,.....Whiteley, Pa.
Laing, William,.....Fire Creek.
Lane, John Forester,.....Weston.

Lodge, John Dunkin,.....Bridgeport.
McBee, Thomas Judson,.....Halleck.
McBride, Marguerite,.....Washington, D. C.
McMillen, Perry Wade,.....Masontown.
Miller, Louise Ansley,.....Wellsburg.
Murphy, Edward Everett,.....Maidsville.
Pearcy, Charles Lewis,.....Morgantown.
Pinkney, Harry,.....Montgomery.
Reiner, Elsie Maud,.....Easton.
Rex, Frank Clyde,.....Ingram, Pa.
Ritter, Thomas Minter,.....Bristol.
Ross, Charley Fordice,.....Simpson.
Ross, Warren Gans,.....Dunkard, Pa.
Semmelman, Charles Albert,.....Nestorville.
Sentz, Aurthur Marie,.....Spring Hill.
Somerville, John Ferguson,.....Farmington.
Stewart, James Vance,.....Morgantown.
Steele, Frank Bailey,.....Keystone.
Taylor, Shelby Ethbert,.....Morgantown.
Vaughan, Robert Renwick,.....Lobelia.
Walmsley, Harold Webster,.....Peet.
Warman, Russell McManime,.....Morgantown.
Warman, Winnie,.....Morgantown.
Wharton, Blanche,.....Morgantown.
Whitham, Rachel Elizabeth,.....Morgantown.
Wiles, Luther Young,.....Morgantown.
Willis, Floyd Templeton,.....Bridgeport.
Wilson, James Elmer,.....Mannington.
Woodward, Mayre Ruffner,.....Charleston.
Woodward, Henry Fry,.....Charleston.
Woolcock, Wilbur Thomas,.....Edgarton.

—63

First Year Students.

Alexander, James Lawrence,.....Fort Spring.
Allebaugh, James Delbert,.....Morgantown.
Armstrong, Thomas Banks,.....Salem.
Barclay, Hugh,.....Carmichaels, Pa.
Bonar, John Stanley,.....Rosby's Rock.
Bell, Winnie,.....Bula.
Bennett, Clyde Mortimer,.....Morgantown.
Bingaman, Howard Milton.....Lykens, Pa.
Bloom, Arthur Rudolph,.....Pt. Pleasant.
Bower, Edwin,.....Morgantown.
Campbell, Geo. H.,.....Kasson.
Cather, Sallie,.....Flemington.

Caldwell, Roy,.....Columbus, Ind.
Coda, John Grady,.....Charlotte.
Cooke, John Gordon,.....Hinton.
Coombs, John Ralph,.....Easton.
Core, Mertie Otelia,.....Core.
Core, John Lee,.....Morgantown.
Corbin, Wade Hampton,.....Ellenboro.
Crowe, J. Benton,.....McClellandtown, Pa.
Curtis, Kim Devaul,.....Morgantown.
Dawson, R. F.,.....Morgantown.
Davis, Madge Bell,.....Morgantown.
Davis, David Richard,.....Everson, Pa.
Davis, James William,.....Cairo.
Dayton, Arthur Spencer,.....Philippi.
Donley, Luther Morris,.....Bowlby.
Dotson, James Porter,.....Donohue.
Fair, John Henry,.....Wheeling.
Finnell, Virgil Carl,.....Morgantown.
Fowler, John Clyde,.....Parkersburg.
Hartley, German Smith,.....Liverpool.
Hastings, Elvira,.....Laurel Iron Works.
Henderson, James Stanley,.....McKeesport, Pa.
Hill, Otis,.....Hookersville.
Hollobaugh, Paul Jason,.....Mannington.
Hopwood, Monroe Oscaroe,.....Brandonville.
Hoover, George Porter,.....McClellandtown, Pa.
Humbert, Ira Norman,.....Gans, Pa.
Hunter, Erwin Garfield,.....Stewartstown.
Jolliffe, Frank Cowen,.....Ringgold.
Jones, Henry Francis,.....Core.
Jones, Walter Benington,.....Mole Hill.
Kislig, Charles,.....New Martinsville.
Kunst, Charles Frederick William,.....Pruntytown.
Lantz, Locksley Simon,.....Mole Hill.
Lantz, Laura Zula,.....Mole Hill.
Lamb, Benjamin Leonard,.....Wheeling.
Lawson, Herschel Wayne,.....Clarksburg.
Lough, Myrtle,.....Cassville.
Martin, Carroll Forman,.....Morgantown.
McBee, Alva Holland,.....Morgantown.
McCormick, Nina Ray,.....Morgantown.
McCombs, Edgar Pearl,.....Sherrard.
McFerrin, Samuel Austin,.....Friar's Hill.
McNeill, Chauncey St. Clair,.....Morgantown.
McNeill, Llewellyn Brown,.....Morgantown.
Miller, Estella May,.....Morgantown.

Mitchell, Low Murray,.....Romney.
Morgan, Charles,.....Ringgold.
Moser, John Mortimer,.....McClellandtown, Pa.
Musgrove, William O.,.....Frisco.
Nesbitt, Ralph Sands,.....Cameron.
Norris, Edna,.....Littleton.
Price, George Washington,.....Uffington.
Price, Kathryn,.....Morgantown.
Prunty, Oka Johnson,.....Berea.
Pugh, Lowther B.,.....Morgantown.
Reese, John,.....Claremont.
Robinson, Oscar Wilde,.....Midway.
Romine, Aubrey Laten,.....Johnstown.
Rotharmel, Alva Newcomer,.....McClellandtown, Pa.
Samples, Wm.,.....Cherry Camp.
Shaffer, Clyde Homer,.....Morgantown.
Sine, Ottie Wendelle,.....Blacksville.
Smith, Delbert Ephraim,.....Mole Hill.
Swindler, Willie Tamolean,.....Jaco.
Swindler, George Ray,.....Jaco.
Titus, Morton,.....Greensboro, Pa.
Trapnell, John Machy,.....Charles Town.
Vandervort, Elmer Rosco,.....Easton.
Voight, Harold Alexander,.....Uneva.
Ward, Roy,.....Morgantown.
Weirich, George Orlady,.....Wellsburg.
West, John Thomas,.....Pioneer.
Whaley, Baxter Monroe,.....Finch.
Whipkey, John,.....Broadford, Pa.
Williams, Ashabel Fairchild,.....Gans.
Wilson, Okey Johnson,.....Pennsboro.
Winans, George Clark,.....Washington, D. C.
Young, Howard Archibald,.....Weston.
—91

The Department of Drawing and Painting.

Abersold, Samuel Clement,.....New Martinsville.
Atkeson, Thomas Zephaniah,.....Buffalo.
Baker, Rosa,.....Rouseville, Pa.
Barrackman, Ross,.....Behler.
Bayles, Willie Haldeman,.....Gladesville.
Bennett, Clyde Mortimer.....Morgantown.
Beecher, John Wesley,.....East Liverpool, Ohio.
Brown, Roscoe,.....Clarksburg.
Brown, W. T.,.....Grafton.
Cather, Sallie,.....Flemington.

Cole, Odos Oscar,.....Morgantown.
Cole, Lora Sophia,.....Morgantown.
Colbert, Ada Rebecca,.....Martinsburg.
Colebank, George Henry,.....Claude.
Cooke, John Gordon,.....Hinton.
Corbin, Blanche,.....Fairmont.
Core, George Johnston,.....Core.
Cowan, Elsie Morgan,.....Morgantown.
Crago, Ray C.,.....New Salem, Pa.
Cushman, Leora,.....Brownsville, Pa.
Cutts, Hattie,.....Montgomery.
Davis, Elizabeth,.....Morgantown.
Dawley, Beulah,.....Silver Creek, N. Y.
Dodson, Raymond,.....Spencer.
Fravel, Mary Stewart,.....Poca.
Freshwater, Philip,.....Penrith.
Fortney, John Marion Rogers,.....Gladesville.
Grant, Hannah Elizabeth,.....Morgantown.
Hackney, Blanche,.....Morgantown.
Hall, Hugh Ross,.....Pullman.
Hart, Gertrude,.....Paisley, Pa.
Hayes, Camille Katherine,.....Morgantown.
Henritze, Benson Price,.....Welch.
Herd, Virginia,.....Morgantown.
Herod, Francis Clyde,.....Dunkard, Pa.
Hill, Francis McClennan,.....Everson, Pa.
Hopkins, Georgia Louise,.....Morgantown.
Hopkins, Edwin Butcher,.....Morgantown.
Hoover, George Porter,.....McClellandtown, Pa.
Horner, Annie,.....Clarksburg.
Hughes, Rector Romeo,.....Spencer.
Ireland, Addie Rosalie,.....Morgantown.
Johnson, Belle Wade,.....Morgantown.
Jenkins, John Logan,.....New Cumberland.
Johnson. Belle Wade,.....Morgantown.
Johnson, Annie Ballon,.....Morgantown.
Jones, Bettie Cook,.....Morgantown.
Jones, George R.,.....Wheeling.
Kiger, Reuben Alvin,.....Sherrard.
Kincade, Cora Eleanor,.....Point Pleasant.
Koontz, James Andrew,.....Morgantown.
Lane, John F.,.....Weston.
Leech, Fannie May,.....Morgantown.
Larew, James Edgar,.....Red Sulphur Springs.
Leonard, Frank Otis,.....Buckhannon.
McBride, Douglas Laurie Banks,.....Washington, D. C.

McCombs, Edgar Pearl,.....Sherrard.
McMillan, Perry Wade,.....Masontown.
McMillen, Julius Ray,.....Masontown.
McMillen, Russell Hennen,.....Masontown.
Miller, Estelle May,.....Morgantown.
Milligan, William Godfrey,.....Wheeling.
Michael, Coleman Luke,.....Mannington.
Morris, Joseph Springer,.....Stewartstown.
Murphy, Edward Everett,.....Maidsville.
Muldoon, Harry Ross,.....Morgantown.
O'Grady, Bessie Lee,.....Stewartstown.
O'Neill, Harry Francis,.....Pittsburg, Pa.
Parsons, Frances Anne,.....Morgantown.
Pearcy, Charles Lewis,.....Morgantown.
Price, Kathryn,.....Morgantown.
Provence, Lida Ethel,.....Masontown, Pa.
Reese, John,.....Claremont.
Reiner, Elsie Maude,.....Easton.
Robinson, Jedidiah Waldo,.....Grafton.
Ross, Warren Gans,.....Dunkard, Pa.
Ross, Cora Belle,.....Simpson.
Romine, Aubrey Laten,.....Johnstown.
Rhoades, George Carroll,.....Wheeling.
Rightmire, Edna,.....Morgantown.
Russell, Grace L.,.....Skowhegan, Maine.
Sanders, Mary Virginia,.....Maidsville.
Schrader, Henry Maxwell,.....Lubeck.
Sennett, Maude Lavilla,.....Morgantown.
Seamon, Harry Wheeler,.....Moundsville.
Shane, Bess Dorrance,.....Steubenville, Ohio.
Stewart, Jane,.....Fairview.
Stewart, James Vance,.....Morgantown.
Stump, Iona May Deusenberry,.....Morgantown.
Sperow, Brown Ferdinand,.....Hedgesville.
Tait, Sara Cope,.....Morgantown.
Tapp, Elizabeth,.....Morgantown.
Taylor, Pearl,.....Morgantown.
Titus, Martin,.....Greensboro, Pa.
Ward, Emma,.....Lee Bell.
Walton, William Karl,.....Cameron.
Warman, Winnie,.....Morgantown.
Walmsley, Harold Webster,.....Peet.
Wharton, Blanche,.....Morgantown.
Whitham, Rachel Elizabeth,.....Morgantown.
Whitehill, Elizabeth Wilson,.....Morgantown.
Wilson, James Elmer,.....Mannington.

Wiant, Harold D.,.....Parkersburg.
Wiles, Luther Young,.....Morgantown.
Wiles, Nicketie Buchanan,.....Spaulding.
Woodward, Henry F.,.....Charleston.
Woodward, Mayre R.,.....Charleston.
Yager, Mary Louise,.....Wheeling.
Yoke, Frank Ray,.....Morgantown.
—108

The Preparatory School at Montgomery.

Graduating Class 1901.

Dwyer, Julia,.....Handley.
Dyer, Charles T.,.....Handley.
Embleton, Edith,.....Montgomery.
Keely, John S.,.....Charleston.
Rhodes, George E.,.....Lansing.
Wood, Fred G.,.....Fire Creek.

Other Students.

Allen, Beatrice,.....Montgomery.
Auldridge, Maud,.....Paint Creek.
Bowling, Edna,.....Montgomery.
Beckensteine, Dora.....Montgomery.
Burdette, Pearl,.....Mount Carbon.
Brugh, William,.....Montgomery.
Cole, William,.....Montgomery.
Champ, Emory,.....Montgomery.
Carson, Lawrence,.....Montgomery.
Cummings, Geo. F.,.....East Bank.
Cole, Maggie,.....Montgomery.
Champe, Hallie Lynn,.....Montgomery.
Carlin, Daisy,.....Montgomery.
Cottle, Bertha M.,.....Mount Carbon.
Conner, Carrie,.....Mount Carbon.
Copeland, Daisy,.....Gauley Bridge.
David, Harlow,.....Montgomery.
Dwyer, Richard C.,.....Handley.
Dyer, Charles T.,.....Handley.
Daniel, Bert,.....Montgomery.
Dean, Earnest C.,.....Handley.
Dwyer, Julia,.....Handley.
Davin, Lottie,.....Montgomery.
Dolton, Florence,.....Handley.
Evans, Beatrice L.,.....Gauley Bridge.

Embleton, Edith,.....Montgomery.
Faulkner, Cicely,.....Mount Carbon.
Farley, Maggie,.....Kanawha Falls.
Green, Eva,.....Eagle.
Gibbons, Lillie,.....Duel, Michigan.
Grymes, Mrs. Mary E.,.....Crescent.
Goodwin, Arthur.....Mount Carbon.
High, Charles G.,.....Charleston.
High, J. Logan,.....Charleston.
Holmes, Lillie,.....Mount Carbon.
Heller, Maud Ethel,.....Gauley Bridge.
Harland, Florence,.....Mount Carbon.
Hall, Lelia,.....Deep Water.
Johnson, Jackson L.,.....Dego.
Jenkins, William,.....Mount Carbon.
Johnson, Kenna,.....Fayetteville.
Keely, John S.,.....Charleston.
Kline, Charles,.....Hinton.
Kelly, Helen T.,.....Montgomery.
Linton, Amy,.....Long Acre.
Love, Katie,.....Montgomery.
Montgomery, Helen,.....Montgomery.
Morrison, William,.....Montgomery.
Montgomery, Howard E.,.....Montgomery.
McAllister, Wilson,.....Fire Creek.
Orcutt, Aubrey,.....Charleston.
Pinkney, William,.....Montgomery.
Porter, Ella,.....Montgomery.
Porter, Laura,.....Montgomery.
Phillips, Clara A.,.....Handley.
Phillips, Stella,.....Handley.
Rigg, Effie,.....Powelton.
Rhodes, Geo. E.....Lansing.
Sevy, Claudia,.....Handley.
Smith, Myrtle,.....Montgomery.
Shrewsbury, William,.....Montgomery.
Settle, J. Edward,.....Deep Water.
Tony, William,.....Mount Carbon.
Tony, Eliza,.....Mount Carbon.
Wilson, Anna,.....Scarbro.
Walker, Lola,.....Handley.
Watkins, Nettie.....Kanawha Falls.
Woodruff, Harry H.....Handley.
Wood, Fred G.....Fire Creek.
Wintz, Fred.....Cannelton.
Wood, Herbert.....Fire Creek.

—77

The Department of Instruction by Correspondence.

Adkins, Asa Williams.....Huntington.
Aggleson, Agnes Irene.....Davis.
Ashby, Sophia.....Orange, Va.
Ball, Carrie Gregory.....Bridgeport, Conn.
Bayle, Samuel Brecht,.....Waterford, Pa.
Beall, Clarence Hough.....Morgantown.
Bennett, Lawrence E.....Ireland.
Brand, Franklin Marion.....Cassville.
Cass, Alace.....Larwill, Ind.
Chase, William Parkinson.....Swansea Centre, Mass.
Coggswell, Frances Brooks.....Bridgeport, Conn.
Conley, Emma.....Fon du Lac, Wis.
Cuppett, David Earl.....Glade Farms.
Criss, H. L.....Mannington.
De Wolf, Lotan Reid.....Greeley, Neb.
Dickinson, Helen Louisa,.....Greenwood, S. C.
Dinsmore, Benjamin Scott.....Waynesburg, Pa.
Fortney, Lorain.....West Liberty.
Harrifan, L.....Gormania.
Hastings, Horace Lawrence,.....Fine, N. Y.
Hennen, Ray Vernon.....Sistersville.
Heyl, Carl.....Ridott, Illinois.
Hickman, Charles B.....Mannington.
Johnson, Harriet Dale.....Shepherdstown.
Johnson, John B.....Rocklick.
Kimber, Clara E.....Brooklyn, N. Y.
Kingsley, J. Stanton.....Newark Valley, N. Y.
Klepper, William Henry.....Curwensville, Pa.
Lavers, E. C.....Easton, Pa.
Lewellyn, Elizabeth.....California, Pa.
Morris, Nathan Anderson.....Lebanon, Ind.
Meek, Thomas S.....Wheeling.
McConnell, Harry K.....Sherrard.
Moore, Bismarck Gilbert.....Sistersville.
Montague, Russell Cary.....White Sulphur Springs.
Muldoon, John Dement.....Shepherdstown.
Nestor, George Edison.....Tyrconnell.
Neel, Isa M.....Eaton, Colorado.
Nolte, Henry A.....New Martinsville.
Osborne, Theron Giddings.....Moosic, Pa.
Pabody, Earle Augustus.....Huntington.
Proeger, Minnie.....Greensburg, Pa.
Reger, Roy.....Huntington.
Sanders, Helen Maud,.....Maidsville.

Skinner, James M.....West Liberty.
Sutter, William Frederick.....Nashville, Tenn.
Smythe, Blanche Willard.....Sistersville.
Somerset, Margaret Faith.....Bridgeport, Conn.
South, M. Genevieve.....Blacksville.
Twigg, Wilbur W.....Davis.
Watkins, William Merle.....West Grafton.
Wayt, William Henry.....Green Hill.
Wilson, Thomas E.....Jumonville, Pa.
Youmans, Adelbert Clarence.....Freehold, N. Y.
—54

Summary of Students.

Graduate Students		52
College of Arts and Sciences:		
Seniors	53	
Juniors	35	
Sophomores	39	
Freshmen	43	
Premedical Students	15	
Special Students	100	
Total number of undergraduates in College of Arts and Sciences		337
College of Engineering and Mechanic Arts:		
Seniors	10	
Juniors	7	
Sophomores	11	
Freshmen	7	
Special Students	6	
Total number of students in College of Engineering and the Mechanic Arts		41
College of Agriculture:		
Graduate Students	4	
Seniors	2	
Sophomores	2	
Freshmen	4	
Special Students	24	
Total number of students in College of Agriculture		36
College of Law:		
Seniors	46	
Juniors	29	
Special Students	35	
Total number of students in College of Law		110

School of Music:		
Piano	85	
Guitar	13	
Mandolin	8	
Banjo	2	
Clarionet	2	
Harmony	11	
Organ	5	
Violin	13	
Total number of students in the School of Music		139
Department of Drawing and Painting		108
Commercial School		155
The Preparatory School at Morgantown:		
Fourth year	42	
Third year	49	
Second year	63	
First year	91	
Total number of students in Preparatory School at Morgantown		239
Total enrollment of students at Morgantown		882
Students receiving instruction from Morgantown by correspondence		54
Total number of students receiving instruction from Morgantown		936
Students in Preparatory School at Montgomery		77
Total number in University and Preparatory Schools		1013

Summary of Students by States and Countries.

Resident Students at Morgantown.

West Virginia	766
Pennsylvania	86
New York	7
Virginia	5
Ohio	4
District of Columbia	3
Illinois	2
Maryland	2
Connecticut	2
Montana	2
Indiana	1

Wisconsin	1
Asia Minor	1
Total	882

Correspondence Students.

West Virginia	31
Pennsylvania	8
New York	4
Connecticut	3
Indiana	2
Virginia	1
Massachusetts	1
Wisconsin	1
Illinois	1
Nebraska	1
South Carolina	1
Tennessee	1
Total	54

Degrees Conferred in 1900.

Master of Arts.

Alexander Gallatin McChesney,
William Henry Whitham,
Carrie Louise Dent,
Thomas Carskadon Johnson,
William Frazier Naret,
Myron Carleton Lough,
Bernard Camillus Bondurant.
Silas Marion Hoff.
Robert Morris.

Bachelor of Arts.

Carrie Louise Dent,
Robert Douglas Roller, Jr.,
Edwards Stuart Stalnaker,
Phil. Anderson Shaffer,
David Hott,
Alpheus Wilson Smith,
Lorain Fortney,
Grace Lunsford Brahm,
Ira Benton Bush,
Lathrop Russell Charter, Jr.,
Charles Henry Ebers,
Howard Mason Gore,
William Janes,
Hannah Louise Jones,
Scott Cephas Lowe,
Bruce McKinley,
John Augustine Willis,
Emma Conley,
Hugo Frankenberger,
Leonard S. Hall,
Alexander Gallatin McChesney,
Van Ara Barrackman,
Bertha Cleland Browning,
Willa Hart Butcher,
George Washington Conley,
Harrison Jules Louis Frank,
Ray Vernon Hennen,
Gillian Jamison,
William Scott John,
David Lemen,
William Gregory Marten,
Haymond Maxwell,
Walter Alexander McGlumphy
James Alva Meredith,
Clyde Randolph,
Benjamin Richardson Roller,
Buckner Fairfax Scott,
Charles Walter Waddell,
Peerce Naylor McDonald,
Alberta Claire McVicker,
James Clarence Poe,
Ina Blanche Rightmire,
Wilbur Lawrence Robe,
Walter Haines South,
Alvaroe Glenn Hughes.
Walter Forse Holland.

Bachelor of Science.

Walter Loring Lowe.

Bachelor of Arts in Law.

Louis Armstrong Yeager.

Bachelor of Science in Agriculture.

Thomas Zephaniah Atkeson.

Bachelor of Laws.

Kemble White,
Van Ara Barrackman,
Thomas Coleman,
Scott Cephas Lowe,
Charles Curtin Rose,
Edward Staples Barnitz,
Gibson Lamb Caldwell,
William Wellington Hughes,
James Alva Meredith.

Certificates.

Certificate in Law.

Henry Stuart Cato,
Jesse Ward Daniel,
Clark Langley,
Clay Day,
Robert Emmet Guy,
Frank Weaver,
John Cookman,
LeRoy Virgil Holsberry,
Count Lee Radcliffe,
Jos. Henry Harrison Donahey,
Charles Patrick Sweeney,
George Rogers Clark Wiles.

Certificate in Music.

Flora Ray Hayes.

Certificate in Art.

Addie Rosalie Ireland.

Admitted to the Bar on Examination.

The following is a list of the names of candidates who have been examined by the Law Faculty, as required by the statute, for admission to the Bar in West Virginia, and received certificates, including the period from May, 1900, to May, 1901:

Beatty, J. F.....Marion County.
Bowman, S. H.....Barbour County.
Byrnside, M. A.....Putnam County.
Carlin, E. B.....Preston County.
Chapman, A. C.....Claysville, Pa.
Cooley, George W.....Strasburg, Va.
Correll, S. O.....Greenbrier County.
Eary, J. W.....Fayette County.
Hall, C. L.....Wetzel County.
Hammond, H. L. .....Doddridge County.
Harper, J. M.....Roane County.
Hardwicke, Daniel Boone.....Wayne County.

Hill, T. R. ..... Pocahontas County.
Higginbotham, A. P. U. ..... Mercer County.
Horner, T. R. ..... Harrison County.
Hobbs, H. C. ..... Virginia.
Johnson, C. B. ..... Tyler County.
Kendall, M. A. ..... Wood County.
Lang, A. F. ..... Harrison County.
Martin, C. B. ..... Mercer County.
Moon, Saunders B. ..... Chatham, Va.
Moore, Kit Carson ..... Tyler County.
Moore, Sheridan ..... Ohio County.
McMahan, F. A. ..... Ohio County.
McCaffey, Bert ..... Cabell County.
McVey, Elmo ..... Fayette County.
Naylor, Joseph ..... Ohio County.
Pew, C. N. ..... Upshur County.
Pennybacker, J. Ed ..... Pendleton County.
Powell, S. A. ..... Wood County.
Riggs, F. W. ..... Cabell County.
Reymann, L. A. ..... Ohio County.
Smith, G. N. ..... Harrison County.
Smith, J. D. ..... Lincoln County.
Snyder, D. W. ..... Berkeley County.
Snyder, Newton M. ..... Greenbrier County.
Spurlock, E. W. ..... Lincoln County.
Sweeney, J. L. ..... Summers County.
Taylor, F. L. ..... Doddridge County.
Trippett, W. B. ..... Cabell County.
Woddell, J. L. ..... Webster County.

All of the above forty-one applicants had been students in the College of Law of the West Virginia University, except fourteen. Of these fourteen, six had studied law in the University of Virginia, and two others (colored men) had received the degree of LL.B. in Howard University; and one had received the degree of LL.B. from Georgetown College, leaving only five who had not attended a law school.

INDEX.

Page.

Accredited Preparatory Schools..... 37
Admission Conditions 43
Admission on Certificate..... 46
Admission, Requirements for:
  College of Agriculture..... 123
  College of Arts and Sciences..... 44
  College of Engineering..... 99
  College of Law..... 137
  Commercial School 156
  Military Department 172
  Preparatory School 163
Advanced Standing.....50, 100, 139
Agricultural Experiment Station..... 135
Agricultural Home Reading Course..... 132
Agriculture, College of..... 122
Anatomy and Physiology..... 84
Anglo-Saxon 70
Anthropolgy 55
Approved Boarding and Rooming Places..... 37
Art Courses 93
Astronomy 23, 76
Athletics 25, 51
Bacteriology 85
Bar Examinations 143
Board of Regents..... 8
Boarding and Rooming..... 37
Bookkeeping 158
Botany 82
Buildings 19
Cadet Corps 172
Central Oratorical League..... 25
Chapel 35

Page.
Chemistry 78
Church Halls 35
Civil Engineering 110
Commercial School 155
Correspondence, Instruction by 176
Degrees:
In the College of Arts and Science 46
In the College of Agriculture 123
In the College of Engineering 100
In the College of Law 139
Conferred in 1900 213
Discipline 35
Domestic Science 87
Drawing 93
Economics 56
Elocution 74
Elkins Prizes in Greek 32
English Language and Literature 71
Engineering and Mechanic Arts, College of 96
Entomology 131
Entrance Requirements 43
Entrance Examinations 45
Examinations for Admission to the Bar 143
Expenses and Fees 37, 150
Faculty 9
Fellowships 34
Fine Arts 93
French 66
Funds 19
Geology 80
German 68
Greek 62
Gymnasium 24, 176
History 59
Horticulture and Forestry 129
Italian 67
Latin 64
Law, College of 137
Law Library 143
Library 40
Manual Training 109
Mathematics 75
Materia Medica 86
Mechanical Engineering 106
Mechanics and Applied Mathematics 119

Page.
Medicine, College of 89
Military Department 172
Mining Engineering 110
Montgomery Preparatory School 170
Music, School of 147
Pedagogy 53
Pharmacy 90
Philosophy 52
Physics 76
Physical Training 176
Political Science 58
Preparatory Schools 162
Prizes 27
Rhetoric 71
Rules and Regulations 49
School of Music 147
Scott Prizes 29
Sociology 55
Spanish 67
Students, Lists of 177
Theses 51
Tuition, School of Music 150
Thompson prize in Anatomy 33
Typewriting 160
Veterinary Science 130
Wiles Prize in Oratory 28
Zoölogy 81

West Virginia University

MORGANTOWN, W. VA.

THE COURSE IN PHARMACY

April 1, 1900

Morgantown, W. Va.
Published by the University

THE COURSE IN PHARMACY.

The proper place of drugs and of the dispensers of drugs is a much discussed question in modern medical literature, but with the present increasing tendency toward specialization and toward raising the standard of medical training, it seems certain that the thoroughly efficient and capable pharmacist who keeps pace with the advancement of therapeutic medicine and the allied sciences will become a more and more necessary part of the medical profession.

The efficiency of the pharmacist is, however, an all important point. The registered pharmacist should not only be able to fill prescriptions with accuracy and intelligence, but he should also be able to ascertain the quality and degree of purity of the drugs and chemicals from which the prescriptions are filled. He should further be competent to make for physicians such chemical and microscopical examinations as the latter may have neither the time nor facilities for making. Lastly, the progressive pharmacist should be able to keep pace with the advance which will certainly be made in the pharmaceutical sciences during the coming three or four decades. In order to do this he must not only have a clear and exact knowledge of chemistry and certain branches of the biological sciences, but he must also be thoroughly conversant with one or two modern languages besides English, especially with the language of the sciences, German.

The course in Pharmacy offered at the West Virginia University has been planned to meet the above requirements, and it must be emphasized that no student will be permitted to graduate who has not fulfilled them.

Admission to the Course in Pharmacy.

The conditions of admission to the course in Pharmacy are the same as the conditions of admission to the courses leading to the degree of Bachelor of Arts; but no student can complete the course in Pharmacy unless his preparatory work has included nine courses in English, six courses in German, and six courses in Latin. It is expected that the Bachelor of Science in Pharmacy shall be an older and more mature student than the average college graduate, since his training is not only educational but also professional. Students who expect to take the course in Pharmacy are advised to first complete the following preparatory work:

English, - - - - - - -	9 courses;
Latin, - - - - - - -	6 courses;
French, - - - - - - -	6 courses;
German, - - - - - - -	6 courses;
Algebra - - - - - - -	3 courses;
Plane Geometry, - - - - -	2 courses;
History, - - - - - - -	3 courses;
Physics, - - - - - - -	2 courses;
Free Hand Drawing, - - - -	2 courses.

These studies can be taken in the Preparatory School according to the schedule outlined below.

HOUR	FALL	WINTER	SPRING
		FIRST YEAR.	
8:00	Algebra 1	Algebra 2	Algebra 3
9:00	English 1	English 2	English 3
11:00	Latin 1	Latin 2	Latin 3
		SECOND YEAR.	
10:00	Latin 4	Latin 5	Latin 6
11:00	English 4	English 5	English 6
12:00	French 1	French 2	French 3
		THIRD YEAR.	
9:00	German 1	German 2	German 3
10:00	Fr. Hd. Draw. 1	Fr. Hd. Draw. 2	Plane Geom. 1
12:00	French 4	French 5	French 6
		FOURTH YEAR.	
8:00	German 4	German 5	German 6
9:00	English History	U. S. History	Civics
10:00	English 7	English 8	English 9
11:00	Plane Geometry 2	Physics 1	Physics 2

Exceptionally mature and capable students and students who have satisfactorily passed one year's work in Latin and in Algebra may be able to complete the above preparatory work in three years.

DESCRIPTION OF PREPARATORY COURSES

Required for Admission to the Course in Pharmacy

As given in the Preparatory School at Morgantown.

In the following announcements, unless otherwise noted, each course described is a full course, the class meeting five times a week, Mondays to Fridays, inclusive, throughout one entire quarter. The quarter during which the course is given, as well as the hour and class room, are named, whenever possible, at the end of the announcement of each course. When a course is given more than once during the year, each quarter in which it is given is named.

All courses are designated by the name of the department and the number of the particular course. Thus the first course in German is known as "German 1;" the course in Organic Chemistry is known as "Chemistry 3," etc. The abbreviations used are: U., University Hall; S., Science Hall; M., Martin Hall.

English.

PROFESSOR MILLER AND MR. FRIEND.

FIRST YEAR.

1 **Grammar.** Harvey's Grammar, with careful drill in orthography, punctuation, etc. Fall, first section, 8:00; second section, 9:00; 10 M.

2 **Grammar.** Whitney's "Essentials of Grammar."
Winter, first section, 8:00; second section, 9:00; 10 M.

3 **Composition.** Reed and Kellogg's "Higher Lessons in English" to Lesson 112, with oral analysis and especial attention to synthetic exercises. Spring, first section, 8:00; second section, 9:00; 10 M.

SECOND YEAR.

4 **Composition.** Reed and Kellogg's "Higher Lessons in English," completed, with drill in composition.
Fall, first section, 10:00; second section, 11:00; 10 M.

5 **Composition.** Buehler's "Practical Lessons in English," with critiques and reviews. Careful reading, with analysis and word study, of one of the English classics required for entrance to College.
Winter, first section, 10:00; second section, 11:00; 10 M.

6 **Rhetoric.** Hill's "Elements of Rhetoric" to Chapter V, with one of the English classics as in Course 5.
Spring, first section, 10:00; second section, 11:00; 10 M.

THIRD YEAR.

7 **Rhetoric.** Hill's "Elements of Rhetoric," completed, with continued drill in composition and one of the English classics as in Course 5. Fall, 10:00; 23 S.

8 **Literature.** Irish's "Introduction to American Literature," with careful reading of some of the English classics required for entrance to College. In this and the following course the classics are read chronologically with a study of each author among his contemporaries, and as the representative of his period in literature and history.

Winter, 10:00; 23 S.

9 **Literature.** English Literature, including reviews and reading of the classics as in Course 8, continued. Spring, 10:00; 23 S.

Mathematics.

Algebra.

ASSISTANT PROFESSOR THOMPSON AND MR. JOHNSON.

1 **Algebra,** up to and including Simple Equations. Charles Smith's "Elementary Algebra." Fall, 8:00; Winter, 11:00; Spring, 9:00.

2 **Algebra,** up to and including Quadratics. Charles Smith's "Elementary Algebra." Fall, 8:00; Winter, 8:00; Spring, 11:00.

3 **Algebra,** including Progressions and Logarithms. Charles Smith's "Elementary Algebra." Winter, 8:00; Spring, 8:00.

Plane Geometry.

ASSISTANT PROFESSOR THOMPSON

1 **Plane Geometry.** The first two books. Wentworth's "Plane Geometry." Fall, 9:00; Spring, 8:00.

2 **Plane Geometry.** Completed. Wentworth's "Plane Geometry." Fall, 11:00; Winter, 9:00.

Latin.

PROFESSOR HARE AND MR. BONDURANT.

FIRST YEAR.

1 **Etymology.** Chase and Stuart's "First Year in Latin," pages 9-125. Summer, 11:00; Fall, first section, 8:00; second section, 11:00; Winter, 8:00; Spring, 9:00; 13 M.

2 **Syntax.** Chase and Stuart's "First Year in Latin," pages 126-200. Summer, 8:00; Fall, 8:00; Winter, first section, 8:00; second section, 11:00; Spring, 9:00; 13 M.

3 **Oratio Obliqua, and Caesar** (Book I, chs. 1–29). Chase and Stuart's "First Year in Latin," completed.

Summer, 2:00; Fall, 8:00; Winter, 9:00; Spring, first section, 8:00; second section, 11:00; 13 M.

SECOND YEAR.

4 **Caesar's Gallic War** (Books I and II).

Summer, 10.00; Fall, 10.00; Winter, 9.00; Spring, 8:00; 13 M.

5 **Caesar's Gallic War** (Books III and IV). Winter, 10.00; 13 M.

6 **Cicero's First and Second Orations Against Cataline.**

Spring, 10:00; 13 M.

French.

PROFESSOR MCKENZIE AND MR. BALLARD.

1 **Elementary Course.** Grammar, reading, and as much practice as possible in pronunciation and conversation. Whitney's or Edgren's "Grammar." Super's or Whitney's "Reader."

Summer, 11:00; Fall, first section, 11:00; second section, 12:00; Spring, 9:00; 10 U.

2 **Elementary Course.** A continuation of Course 1. The Grammar and the Reader will be finished, and the reading of easy French texts continued. Summer, 9:00;

Winter, first section, 11:00; second section, 12:00; 10 U.

3 **Modern Prose.** A continuation of Course 2. Reading from works by Erckmann-Chatrian, Enault, George Sand, etc.; Grandgent's "Materials for French Composition." It is expected that in Courses 1, 2 and 3 the elements of French grammar will be mastered, a fair pronunciation acquired, and 450 to 500 pages of modern prose and poetry read.

Spring, first section, 11:00; second section, 12:00; 10 U.

4 **Fiction of the Nineteenth Century.** Works by Daudet, Dumas, About, etc.; La Fontaine's "Fables." Practice in writing and speaking French, continued through Courses 5 and 6. For students who have had one year of French. Summer, Fall, 12:00; 10 U.

5 **Historical and Dramatic Works of the Nineteenth Century.** Works of Michelet, Paileron, Dumas, Scribe, Victor Hugo.

Winter, 12:00; 10 U.

6 **Dramas of the Seventeenth Century.** Corneille, Racine, Moliere. Spring, 12:00; 10 U.

NOTE.—Courses 4, 5 and 6 are continuous, and it is recommended that they be taken in this order; qualified students will, however, be admitted to Course 5 or 6 without having had the course preceding.

German.

PROFESSOR TRUSCOTT, DR. CARR, AND MR. PORTERFIELD.

1 **Elementary German.** A course for beginners, the object being to acquaint the student with the elements of grammar, to give him a reading knowledge of the easiest German prose, and as much practice in pronunciation as possible. Thomas' "Grammar," Part I; Super's "Elementary German Reader," Part I.

Fall, first section, 9:00; second section, 12:00; 22 U.

2 **Elementary German.** A continuation of Course 1. Reading of easy prose and poetry. Several poems will be memorized and especial attention given to correct pronunciation. Super's "Elementary Reader," Parts II, III, IV; Leander's "Traumereien;" Andersen's "Bilderbuch ohne Bilder."

Winter, first section, 9:00; second section, 12:00; 22 U.

3 **Elementary German.** A continuation of Course 2. Reading, dictation and conversation. Elementary work in composition, accompanied by a review of the main points of the grammar, and a special study of the irregular verbs. "Immensee;" "Höher als die Kirche;" "L'Arrabiata" (Lentz' edition); Hatfield's "Materials for Composition."
Spring, first section, 9:00; second section, 12:00; 22 U.

4 **German Prose.** Rapid reading of a large amount of prose by modern authors to render the student familiar with the idioms of the language and give him a large and varied vocabulary. Nichols' "Three German Tales;" Wilderbruch's "Stille Wasser;" Keller's "Kleider Machen Leute." Fall, 8:00; 22 U.

5 **Composition and Conversation.** Practice in writing German and translation of English prose into German. Discussion of grammatical points in connection with translation. Study of the irregular verbs. Dictation. A part of the time will be devoted to conversational exercises. Reading at sight. Harris' "Prose Composition;" Watson's "German Sight Reading;" Schrakamp's "Erzahlungen aus der deutschen Geschichte."
Winter, 8:00; 22 U.

6 **German Poetry.** Translation of two long poems; von Klenze's "Deutsche Gedichte;" "Hermann und Dorothea" (Hatfield); "Trompeter von Sackkingen" (Frost). Spring, 8:00; 22 U.

History.

PROFESSOR FAST AND ASSOCIATE PROFESSOR DANIELS.

1 **Outlines of United States History.** A general course of narrative and political history required for admission to all the other courses in American History. Fiske's "History of the United States."
Winter, 9:00; 6 M.

5 **History of England.** This course will outline the history of England from the Teutonic settlements to the present time. Fall, 9:00.

Civics.

PROFESSOR FAST.

1 **Civil Government in the United States.** A course with special reference to the origin of types of local government in the United States, embracing an outline of state and federal government. Two pieces of written work, prepared from material in the library, will be required: (a) a phase of colonial government; (b) a phase of local government. Fiske's "Civil Government in the United States."
Spring, 9:00.

Physics.

PROFESSOR HODGES AND MR. WHITHAM.

1 **Elementary Physics.** Mechanics and Heat. Recitations, supplemented by experiments and laboratory exercises. One hour per week

at least will be devoted to individual laboratory work. Wentworth and Hill's "Text Book of Physics." Prerequisite, Plane Geometry.

Winter, 11:00; 11 S.

2 **Elementary Physics.** Electricity and Magnetism. Sound and Light. Continuation of Course 1. Spring, 11:00; 11 S.

Courses 1 and 2 will satisfy the entrance requirements in Physics. Students in the College who have not presented work in Physics among their entrance requirements, may receive college credit for these courses.

Drawing.

MRS. HUBBARD.

1 **Freehand Drawing.** An elementary course in study of outline, form and geometric design. The special aim is to train the eye and hand to delineate forms with accuracy and rapidity. Study of the geometric forms, plane and solid. Drawing the geometric solids and vases. Outline drawings of leaves and ornament from the cast; drawing of plant forms from nature. Various drawings from objects. A. K. Cross' "Freehand Drawing." Fall, 10:00; 12 S.

2 **Course in Perspective.** Principles of perspective studied and applied to the drawings of familiar objects and the construction of arches, buildings, etc. Continued drawing from the cast and study of design. Reference books: Trowbridge's "Perspective Drawing;" Burns' "Illustrated Drawing Book," and Minifee's "Mechanical Drawing." Winter, 10:00; 12 S.

THE COURSE IN PHARMACY.

The course in Pharmacy leading to the degree of B. S. in Pharmacy, is to cover four years. It will include the following studies:

German,	3 courses;
Botany,	6 courses;
Zoölogy,	3 courses;
Physiology,	3 courses;
Bacteriology,	1 course;
Chemistry,	12 courses;
Materia Medica,	3 courses;
Pharmacognosy,	1 course;
Theoretical Pharmacy,	3 courses;
Electives	5 courses;
Thesis,	1 course;
Study of current scientific literature,	3 courses;
	42 courses.

These courses may be taken according to the following schedule:

First Year.

HOUR	FALL	WINTER	SPRING
9:00	Chemistry 1	Chemistry 2	Chemistry 3
10:00	German 10	German 11	German 12
1:30-3:30	Botany 3	Botany 4	Botany 5

Second Year.

	FALL	WINTER	SPRING
8:00-10:00	Zoölogy 1	Zoölogy 2	Zoölogy 3
10:00-12:00	Chemistry 14	Chemistry 15	Chemistry 16
1:30-4:30	Chemistry 4	Chemistry 5	Chemistry 9

Study and reports of current literature.

Third Year.

	FALL	WINTER	SPRING
8:00	Anthropology or other Elective	Ethnology or other Elective	Elective
10:00-12:00	Chemistry 11	Chemistry 12	Chemistry 13
12:00	Physiology 1	Physiology 2	Physiology 3
2:00-4:00	Botany 6	Botany 7	Botany 8

Study and reports of current literature.

Fourth Year.

	FALL	WINTER	SPRING
8:00	Elective	Elective	Pharmacognosy
9:00-11:00	Pharmaceutical Technique	Theoretical and Pract. Pharmacy	Theoretical and Pract. Pharmacy
11:00	Materia Medica 1	Materia Medica 2	Materia Medica 3
1:30-3:30	Bacteriology	Thesis	Thesis

Abstracts and discussions of current literature.

COURSES OF INSTRUCTION.

Only the courses included in the Pharmacy Course are described here. In the various departments of the University many other courses of interest and value to the pharmacist are given. For description of these additional courses, the student is referred to the complete departmental announcements in the general University catalogue.

German.

PROFESSOR TRUSCOTT, DR. CARR, AND MR. PORTERFIELD.

10 Lessing. Study of his life. Reading of "die Juden;" "Nathan der Weise." Weekly themes in German on assigned subjects. Fall, 9:00; 22 U.

11 Goethe. Study of his life. Reading of "Werther's Leiden;" "Egmont;" "Torquato Tasso." Weekly themes in German on subjects selected by the student. Winter, 9:00: 22 U.

12 Schiller. Study of his life. Reading of "Wallenstein;" "Wilhelm Tell." Long bi-weekly themes in German on assigned subjects. Spring, 9:00; 22 U.

Botany.

ASSISTANT PROFESSOR COPELAND.

3 The Algæ. The algæ will be studied along physiological as well as morphological lines. Being the simplest typical plants they are well adapted to serve as material for a thorough introductory study of the plant cell. One or two lectures weekly and eight or six hours laboratory work with microscope. Fall.

4 Fungi and Bryophytes. A study of the morphology and taxonomy of these groups. One lecture and eight hours laboratory work. Prerequisite, course 3. Winter.

5 The Vascular Plants. This course will be in considerable part laboratory work, bringing out the relation of the flowering plants to the lower groups, with some field work. One lecture weekly, and four laboratory periods. Prerequisite, course 4. Spring.

6 The Epidermal and Fundamental Tissues. A study of the structure and functions of the tissues of these two systems, with an introduction to histological methods. No text. Prerequisite, course 5. Fall.

7 The Fibrovascular System. A study of the conducting tissues of plants along the lines outlined under course 6, which is a prerequisite. Winter.

8 Cytology. A study of the protoplasm and nucleus, with drill in the technique of hardening, staining, etc. Prerequisite, course 7. Spring.

Zoölogy.

ASSISTANT PROFESSOR J. B. JOHNSTON.

Under the description of each course are given the names of several books for reference which are found in the library and will be of especial value in connection with the given course.

1 **Elementary Zoölogy.** A study of types (Amoeba, Paramoecium, Sponge, Hydra, Earth worm) of the lower classes of animals with reference to structure, functions, and relationships, and of the cell and cell division. Laboratory work supplemented by lectures on the physiology of the cell.

Prerequisites: Two courses in Preparatory English Composition and Rhetoric, or satisfactory evidence of ability to write clear, forcible English.

Parker: Elementary Biology.
Wilson: The Cell in Development and Inheritance.
Hertwig: The Cell.
Hertwig: Zoölogy, Field's Translation.
Wilson: Chapters on Evolution.
Sedgwick and Wilson: Elementary Biology.

Fall, Lectures T., Th., at 10. Laboratory work six hours a week.

2 **Introduction to Vertebrate Zoölogy.** The structure and development of the frog, and the classification of vertebrates. This course should be taken by prospective medical students and by those intending to give especial attention to vertebrate zoölogy, during their first year of zoölogical work. Prerequisite, course 1.

Ecker's Frog, (preferably Gaup's edition).
Marshall: Embryology.
Macalaster: Zoölogy.
Parker and Haswell: Zoölogy, Vol. II.

Winter, Lectures T., Th., at 10. Laboratory work six hours a week.

3 **The Evolution of Species.** A presentation of the evidences of evolution, with an account of the current theories. Illustrated lectures and reading. This course may be taken as an introduction to all other courses in Zoölogy, or in the third quarter of the first year's work. It counts as a half course and may advantageously accompany course 4.

Spring, two lectures a week at an evening hour.

Chemistry.

PROFESSOR WHITEHILL AND ASSISTANT PROFESSOR FOLIN.

1 **Inorganic Chemistry.** This course is designed for beginners, and serves as a general introduction to chemical methods and operations. It includes a systematic study of the laws of chemical combinations, the

source, preparation, properties and compounds of the non-metallic elements and the principles and theories of chemical philosophy. Experimental lectures, laboratory work and recitations.

Fall, 9:00 or 11:00; 20 S.

2 Inorganic Chemistry. This course includes the study of the metallic elements, and special attention is paid to the application of Chemistry in Agriculture, Engineering, Medicine and every-day life. Lectures, laboratory work and recitations. Winter, 9:00 or 11:00; 20 S.

3 Organic Chemistry. This course includes the study of the more important organic compounds, together with the laboratory processes for the preparation of such compounds. Lectures, laboratory work and recitations. Spring, 9:00.

4 Qualitative Analysis. This course as modified for the students of Pharmacy consists entirely of individual laboratory work with Fresenius as laboratory manual. Menschutkin's "Analysis" and Ostwald's "Theoretical Foundations for Analytical Chemistry" will be used as a basis for occasional recitations and lectures. Prerequisites, Chemistry 1, 2, 3. Fall, Tuesdays, Wednesdays, Thursdays, 1:30-4:30; 22 S.

5 Qualitative Analysis. A continuation of course 4. Each student is permitted to begin Gravimetric Quantitative Analysis during this quarter, but not until he has shown himself capable of testing with certainty and reasonable speed for all the more common metals and acids.

Winter, Tuesdays, Wednesdays, Thursdays, 1:30-4:30; 22 S.

9 Quantitative Analysis. This course is a continuation of courses 4 and 5. Fresenius' "Quantitative Analyse" (last German edition) and Mohr's "Volumetric Analysis" are used as laboratory guides. During the second quarter Toxicology will also be taken up and the students will be taught how to make systematic tests for all the more common alkaloids, glucocides, etc.

Spring, Tuesdays, Wednesdays, Thursdays, 1:30-4:30; 22 S.

11 12 13 Physiological Chemistry. The courses in Physiological Chemistry are the same as those taken by the medical students. The work extends through three quarters and is continuous. The course will begin with the study of a number of organic nitrogenous substances not included in the organic chemistry courses. Foods, digestion, respiration, etc., will be taken up successively, and the course will end in the spring quarter with practice in all the more ordinary medical analyses. Novy's "Physiological Chemistry" is used as a laboratory manual. Hammarsten's "Lehrbuch der physiologische Chemie" Neumeister's "Lehrbuch", and Neubauer and Vogel's "Analyse des Harns" will be freely consulted. Reports on current literature will be required at regular intervals. Fall, Winter, Spring, 10:00-12:00; 22 S.

14 15 16 **Organic Chemistry.** These courses are open to students of Pharmacy only. The conrses are largely laboratory courses with E. Fischer's "Organische Praparate" as laboratory manual and with Gattermann's "Methods of Organic Chemistry" and Lassar-Cohn's "Methods of Organic Chemistry" for reference. In addition to six hours laboratory work a week, two lectures or recitations will be required. Richter's "Organische Chemie" (last German edition) will be used as a basis for these. The students in organic chemistry will also be required to write abstracts and discussions of some of the best current articles on the subject so as to familiarize them with the current chemical periodicals. Fall, Winter, Spring; Tuesdays, Wednesdays, and Thursdays, 10:00-12:00; 22 U.

Lecture and recitation hours to be arranged.

Bacteriology.

ASSISTANT PROFESSOR THAYER.

1 **Bacteriology.** A course of actual laboratory work of two hours daily during one quarter, supplemented by lectures and informal talks. The preparation of culture media, the methods of detection and identification of bacteria, and the verification of results by experiment, with the delicate and complicated technique involved, will be thoroughly taught. Each student makes a collection of typical specimens. Fall, 1:30.

Physiology.

1 **General Physiology.** This course will treat of the fundamental principles underlying the functions of the cell, proceeding to cell aggregates or tissues, the blood, and the circulation. Fall, 12:00.

2 **General Physiology.** The functions of the lungs, of the alimentary tract, and of the excretory organs will be studied. Winter, 12:00.

3 **General Physiology.** The nervous system, the special senses and the physiology of reproduction will be treated during the third quarter of the year. Spring, 12:00.

Materia Medica and Pharmacognosy.

ASSISTANT PROFESSOR THAYER.

1 **Materia Medica.** Drugs, their properties, preparation and doses will be taught by recitations, lectures, and laboratory work. The ground covered in this course' includes the chief inorganic drugs and the antiseptics. A cabinet of the most important medicines has been formed to assist the student in his work. Fall, 11:00.

2 **Materia Medica.** In this course the text book (provisionally Bartholow, 10th edition) will be completed, and the regular recitations supplemented by lectures, which will form a larger proportion of the course than in Materia Medica 1. Winter, 11.00.

3 **Materia Medica.** This course is practical as far as possible, including the application of healing agencies of all kinds. The instruction will be given by lectures, recitations, and a free use of the chief domestic and foreign periodicals. Each student will be required to make frequent reports before the class of recent therapeutic advance and take part in the discussions of the subjects pursued. Spring, 11:00; 1 U.

4 **Materia Medica. Pharmacognosy.** A course will be given in the recognition of crude drugs, the varieties and sources of the substances used as medicines, and the detection of adulterations. The drug cabinet contains about two hundred selected specimens of crude drugs as bark, seed, leaf, root, gum, etc., and this will be enlarged as required. Constant study of the dispensatory, trade lists, and drugs as they occur in commerce, will train the student in the actual work of drug sampling and buying. Recitations and laboratory work. Prerequisite, Materia Medica 1 and 2. Spring, 8:00; 1 U.

Theoretical and Practical Pharmacy.

Constant study of the best American and German Pharmacopœias and of the best pharmaceutical literature will be required throughout these courses. The laboratory work will be entirely individual and will consist of such strictly pharmaceutical work as the students have not yet learned in the courses in pure Botany and Chemistry. The analysis of drugs, the preparation of medicines from crude drugs, the filling of prescriptions, etc., will take up all time that can be spared for such purposes throughout the last year, and aside from the regular hours, the laboratory will be open to the students of Pharmacy during the afternoons for such work. Fall, Winter, Spring, 9:00-11:00; 22 U.

Theses.

During his college course, the student of Pharmacy is expected to acquire some facility in reading critically the current literature (English, French, German) which has direct bearing upon theoretical and practical Pharmacy. As evidence of sufficient maturity in this work, the student will be required to produce before graduation a thesis on some pharmaceutical subject. This thesis must contain an adequate review of the work of previous investigators and the report of personal investigations on the subject. The thesis will count as one full course, and the student is expected to give to the investigations not less than four hours laboratory work per week during each of the last two quarters before graduation.

The University Year.

The University is virtually in continuous session, the three months vacation in summer having been abolished, so far as the University itself is concerned. The University year is divided into four quarters, of twelve weeks each, with recesses of one week between quarters. No student or instructor is expected to work at the University more than nine months out of twelve, unless he desires to do so. Under this system a student may begin his work at the beginning of any quarter, and may take his vacation either during the Summer Quarter, or during the Fall, Winter or Spring Quarter. He is, however, at liberty to continue his University work during all four quarters, if he is strong enough, and desires to do so. Similarly, an instructor may arrange to take his vacation in any quarter of the year, provided arrangements can be made in regard to the instruction in his department. The courses of instruction are arranged so that the work of each quarter is complete in itself. The classes in most subjects meet five times a week, enabling many topics to be covered in single quarters, and many more new classes to begin with each quarter than is possible under any other system. Courses for which there is great demand are given more than once in the same year, so that any student in attendance during that year may have the opportunity of taking them, in whatever quarter or quarters he takes his vacation.

University Fees.

Except in the School of Music, tuition is free to West Virginia students. To students from other states the tuition is:

In the Preparatory School, $5.00 per quarter;

In the Commercial School, $5.00 per quarter;

In the College of Law, $8.00 per quarter;

In the other colleges, $12.50 per quarter.

The matriculation fee is $5.00, payable upon entering the University by all students. Unless the student remains out of the University more than three years, the matriculation fee is paid but once.

The contingent fee is $2 per quarter, payable by all students except State Cadets.

Students taking laboratory courses pay the following fees to cover the cost of material used: General Chemistry, Botany, and Zoölogy, $2 per quarter; Analytical Chemistry, Organic Chemistry, Physiological Chemistry, and Pharmacy, $6.50 per quarter; Bacteriology, $5.00 per quarter.

Board and Lodging.

It is possible to secure board and lodging in Morgantown for $3.00 per week. Most students, however, pay from $3.25 to $4.00 per week.

West Virginia University

MORGANTOWN, W. VA.

Department of Domestic Science

April 1, 1900

Morgantown, W. Va.
Published by the University

THE DEPARTMENT OF DOMESTIC SCIENCE.

Staff of Instruction.

HANNAH BELLE CLARK, Ph. D., Assistant Professor of Domestic Science and Dean of Women.

A. B., Smith College, 1887; Ph. D., University of Chicago, 1897. Graduate student in Sociology, Smith College, 1887-88; Graduate student in Sociology and Sanitary Science, University of Chicago, 1893-96; Instructor, Dearborn Seminary, Chicago, 1887-93 and 1894-99. Present position since 1899.

ELEANOR BROWN MORELAND, A. B., Fellow in Domestic Science.

A. B., West Virginia University, 1898. Graduate student in Domestic Science, Lewis Institute, Chicago, 1899-1900.

THE DOMESTIC SCIENCE COURSE.*

The unique functions of the home and its importance as a fundamental social institution render its effective organization one of the greatest social tasks. Domestic Science has for its province the correlation of such knowledge bearing on this task as has been gained by the sciences of Sociology, Economics, Physics, Chemistry, Biology, and Sanitation, and its application in the household arts. To this end it considers such problems as: the conditions necessary for a sanitary home, the soil, ventilation, sewerage, heating, etc.; the selection of food with reference to its nutritive and economic value, and its proper preparation; economic domestic administration, family budgets, domestic service; and the sanitation of groups of homes, i. e., communities and states.

Throughout the country there is a growing interest in the subject of healthful living, its conditions, and the means of fulfilling them. Intelligent men and women are asking questions and seeking directions, but there are as yet few who can satisfy them, because few have studied the subject. Thoroughly trained students in this department are being vainly sought as teachers in public and private schools and in colleges, as officers of administration in charitable institutions, as directors of diet kitchens, as members of school boards and village improvement societies, as philanthropic workers, and as sanitary inspectors. This demand the University can now satisfy to some extent by offering a course which affords an opportunity to secure thorough preparation for such positions.

The department offers work to two classes of students: first, those who desire to take advantage of such openings as those referred to above, and who therefore make Domestic Science their major subject during a four years course; and second, those who simply wish to take one or more courses in the subject as electives. The first group will lay the foundations for the applied work in Domestic Science, in a broad study of natural science, together with modern languages, History and Sociology. The second group may elect freely the courses they desire.

The department is supplied with all needed reference books and periodicals, the Pratt Institute food charts and food museum, and a well equipped laboratory kitchen.

ADMISSION TO THE DOMESTIC SCIENCE COURSE.

The conditions of admission to the Domestic Science Course are the same as for admission to the other courses leading to the degree of Bachelor of Arts; but students who wish to take the Domestic Science Course are advised to shape their preparatory course so as to include the following courses:

English,	9 courses;
Latin,	3 courses;
German,	6 courses;
French,	6 courses;
History,	2 courses;
Civics,	1 course;
Mathematics,	5 courses;
Physics,	2 courses;
Chemistry,	3 courses;
Botany,	2 courses:
Total,	39 courses.

Preparatory Schedule.

This preparatory work can be taken according to the following schedule:

HOUR	FALL	WINTER	SPRING
		FIRST YEAR.	
8:00	Algebra 1	Algebra 2	Algebra 3
9:00	English 1	English 2	English 3
11:00	Latin 1	Latin 2	Latin 3
		SECOND YEAR.	
8:00			Plane Geometry 1
9:00	English History	U. S. History	Civics
10:00	English 4	English 5	English 6
11:00	French 1	French 2	French 3
		THIRD YEAR.	
9:00	German 1	German 2	German 3
10:00	French 4	French 5	French 6
11:00	Plane Geometry 2	Physics 1	Physics 2
		FOURTH YEAR.	
8:00	German 4	German 5	German 6
9:00	Chemistry 1	Chemistry 2	Chemistry 3
10:00	English 7	English 8	English 9
1:30		Botany 1	Botany 2

While real equivalents will be accepted for admission to college as substitutes for the above preparatory studies, the college course in Domestic Science outlined below is arranged for students who have had the preparatory studies mentioned above. College students in the Domestic Science course who have not presented for admission to college all the above preparatory studies will substitute for some of the studies in the Domestic Science course outlined below the above preparatory studies which they have not previously had.

DESCRIPTION OF PREPARATORY COURSES

For the Domestic Science Course

As given in the Preparatory School at Morgantown.

English.

PROFESSOR MILLER AND MR. FRIEND.

FIRST YEAR.

1 **Grammar.** Harvey's Grammar, with careful drill in orthography, punctuation, etc. Fall, first section, 8:00; second section, 9:00; 10 M.

2 **Grammar.** Whitney's "Essentials of Grammar."
Winter, first section, 8:00; second section, 9:00; 10 M.

3 **Composition.** Reed and Kellogg's "Higher Lessons in English" to Lesson 112, with oral analysis and especial attention to synthetic exercises. Spring, first section, 8:00; second section, 9:00; 10 M.

SECOND YEAR.

4 **Composition.** Reed and Kellogg's "Higher Lessons in English," completed, with drill in composition.
Fall, first section, 10:00; second section, 11:00; 10 M.

5 **Composition.** Buehler's "Practical Lessons in English," with critiques and reviews. Careful reading, with analysis and word study, of one of the English classics required for entrance to College.
Winter, first section, 10:00; second section, 11:00; 10 M.

6 **Rhetoric.** Hill's "Elements of Rhetoric" to Chapter V, with one of the English classics as in Course 5.
Spring, first section, 10:00; second section, 11:00; 10 M.

THIRD YEAR.

7 **Rhetoric.** Hill's "Elements of Rhetoric," completed, with continued drill in composition and one of the English classics as in Course 5. Fall, 10:00; 23 S.

8 **Literature.** Irish's "Introduction to American Literature," with careful reading of some of the English classics required for entrance to College. In this and the following course the classics are read chronologically with a study of each author among his contemporaries, and as the representative of his period in literature and history.
Winter, 10:00; 23 S.

9 **Literature.** English Literature, including reviews and reading of the classics as in Course 8, continued. Spring, 10:00; 23 S.

Latin.

PROFESSOR HARE AND MR. BONDURANT.

FIRST YEAR.

1 **Etymology.** Chase and Stuart's "First Year in Latin," pages 9-125. Summer, 11:00; Fall, first section, 8:00; second section, 11:00; Winter, 8:00; Spring, 9:00; 13 M.

2 Syntax. Chase and Stuart's "First Year in Latin," pages 126-200. Summer, 8:00; Fall, 8:00; Winter, first section, 8:00; second section, 11:00; Spring, 9:00; 13 M.

3 Oratio Obliqua, and Caesar (Book I, chs. 1–29). Chase and Stuart's "First Year in Latin," completed.

Summer, 2:00; Fall, 8:00; Winter, 9:00; Spring, first section, 8:00; second section, 11:00; 13 M.

German.

PROFESSOR TRUSCOTT, DR. CARR, AND MR. PORTERFIELD.

1 Elementary German. A course for beginners, the object being to acquaint the student with the elements of grammar, to give him a reading knowledge of the easiest German prose, and as much practice in pronunciation as possible. Thomas' "Grammar," Part I; Harris' "Reader," Part I. Summer, 9:00; Fall, first section, 9:00; second section, 12:00; Winter, 11:00; 22 U.

2 Elementary German. A continuation of Course 1. Reading of easy prose and poetry. Several poems will be memorized and especial attention given to correct pronunciation. Reading at sight. Harris' Reader, Parts II, IV and VI.

Winter, first section, 9:00; second section, 12:00; Spring 11:00; 22 U.

3 Elementary German. A continuation of Course 2. Reading, and conversation. Elementary work in composition accompanied by a review of the Grammar. Storm's "Immensee." "Höher als die Kirche." "Im Zwielicht." Hatfield's "Materials for Composition."

Spring, first section, 9:00; second section, 12:00; 22 U.

4 German Prose. Copious reading of German poets to render the student familiar with the idioms of the language and give him a large and varied vocabulary. Nichol's "Three German Tales." Bernhardt's "Novelleten-Bibliothek." Summer, Fall, 8:00; 22 U.

5 Composition and Conversation. Practice in written German and translation of English prose into idiomatic German. A part of the time will be devoted to exercises in conversation. "Methode Berlitz, Erstes Buch." Harris' "Prose Composition." Winter, 8:00; 22 U.

6 German Poetry. "Hermann und Dorothea." Familiar German ballads. Spring, 8:00; 22 U.

French.

PROFESSOR MCKENZIE AND MR. BALLARD.

1 Elementary Course. Grammar, reading, and as much practice as possible in pronunciation and conversation. Whitney's or Edgren's "Grammar." Super's or Whitney's "Reader."

Summer, 11:00; Fall, first section, 11:00; second section, 12:00; Spring, 9:00; 10 U.

2 **Elementary Course.** A continuation of Course 1. The Grammar and the Reader will be finished, and the reading of easy French texts continued. Summer, 9:00;

Winter, first section, 11:00; second section, 12:00; 10 U.

3 **Modern Prose.** A continuation of Course 2. Reading from works by Erckmann-Chatrian, Enault, George Sand, etc.; Grandgent's "Materials for French Composition." It is expected that in Courses 1, 2 and 3 the elements of French grammar will be mastered, a fair pronunciation acquired, and 450 to 500 pages of modern prose and poetry read.

Spring, first section, 11:00; second section, 12:00; 10 U.

4 **Fiction of the Nineteenth Century.** Works by Daudet, Dumas, About, etc.; La Fontaine's "Fables." Practice in writing and speaking French, continued through Courses 5 and 6. For students who have had one year of French. Summer, Fall, 10:00; 10 U.

5 **Historical and Dramatic Works of the Nineteenth Century.** Works of Michelet, Paileron, Dumas, Scribe, Victor Hugo.

Winter, 10:00; 10 U.

6 **Dramas of the Seventeenth Century.** Corneille, Racine, Moliere. Spring, 10:00; 10 U.

NOTE.—Courses 4, 5 and 6 are continuous, and it is recommended that they be taken in this order; qualified students will, however, be admitted to Course 5 or 6 without having had the course preceding.

History.

PROFESSOR FAST AND ASSOCIATE PROFESSOR DANIELS.

5 **History of England.** This course will outline the history of England from the Teutonic settlements to the present time. Fall, 9:00.

6 **Outlines of United States History.** A general course of narrative and political history required for admission to all the other courses in American History. Fiske's "History of the United States."

Winter, 9:00; 6 M.

Civics.

PROFESSOR FAST.

1 **Civil Government in the United States.** A course with special reference to the origin of types of local government in the United States, embracing an outline of state and federal government. Two pieces of written work, prepared from material in the library, will be required: (a) a phase of colonial government; (b) a phase of local government. Fiske's "Civil Government in the United States."

Spring, 9:00.

Algebra.

ASSISTANT PROFESSOR THOMPSON AND MR. JOHNSON.

1 **Algebra**, up to and including Simple Equations. Charles Smith's "Elementary Algebra." Fall, 8:00; Winter, 11:00; Spring, 9:00.

2 **Algebra,** up to and including Quadratics. Charles Smith's "Elementary Algebra." Fall, 8:00; Winter, 8:00; Spring, 11:00.

3 **Algebra,** including Progressions and Logarithms. Charles Smith's "Elementary Algebra." Winter, 8:00; Spring, 8:00.

Plane Geometry.

ASSISTANT PROFESSOR THOMPSON

1 **Plane Geometry.** The first two books. Wentworth's "Plane Geometry." Fall, 9:00; Spring, 8:00.

2 **Plane Geometry.** Completed. Wentworth's "Plane Geometry." Fall, 11:00; Winter, 9:00.

Physics.

PROFESSOR HODGES AND MR. WHITHAM.

1 **Elementary Physics.** Mechanics and Heat. Recitations, supplemented by experiments and laboratory exercises. One hour per week at least will be devoted to individual laboratory work. Wentworth and Hill's "Text Book of Physics." Prerequisite, Plane Geometry. Winter, 11:00; 11 S.

2 **Elementary Physics.** Electricity and Magnetism. Sound and Light. Continuation of Course 1. Spring, 11:00; 11 S.

Courses 1 and 2 will satisfy the entrance requirements in Physics. Students in the College who have not presented work in Physics among their entrance subjects may receive college credit for these courses.

Chemistry.

PROFESSOR WHITEHILL AND ASSISTANT PROFESSOR FOLIN.

1 **Inorganic Chemistry.** This course is designed for beginners, and serves as a general introduction to chemical methods and operations. It includes a systematic study of the laws of chemical combinations, the source, preparation, properties and compounds of the non-metallic elements and the principles and theories of chemical philosophy. Experimental lectures, laboratory work and recitations.
Summer, 10:00; Fall, 9:00; Spring, 10:00; 20 S.

2 **Inorganic Chemistry.** This course includes the study of the metallic elements, and special attention is paid to the application of Chemistry in Agriculture, Engineering, Medicine, and every-day life. Lectures, laboratory work and recitations.
Summer, Winter, 9:00; Fall, 10:00; 20 S.

3 **Organic Chemistry.** This course includes the study of the more important organic compounds, together with the laboratory processes for the preparation of such compounds. Lectures, laboratory work and recitations. Spring, 9:00; 20 S.

Botany.

ASSISTANT PROFESSOR COPELAND.

1 **Elementary Laboratory Botany.** This is very largely a laboratory course, with dissecting and compound microscopes, and including some simple experiments. A text book will be used only for a general guide. Fall, Winter.

2 **Elementary Field Botany.** This course is chiefly outdoor work, and will include practice in the determination of vascular plants.
Spring, Summer.

Courses 1 and 2 may both be presented for entrance credit in Botany. Either may precede the other, but they should be taken in successive terms.

THE DOMESTIC SCIENCE COURSE

Leading to the Degree of A. B.

First Year.

	Fall	Winter	Spring
8:00	Zoölogy 1	Zoölogy 2	Zoölogy 3 and 4
11:00	History 7	History 8	History 9
1:30	M. & W. Physics 4	Physics 4	Physics 4
1:30	T. & Th. Chemistry 4	Chemistry 5	Chemistry 8
4:00	Phys. Training	Phys. Training	Phys. Training

Second Year.

10:00	Phys. Chemistry 11	Phys. Chemistry 12	Phys. Chemisty 13
12:00	History 11	History 12	History 18
1:30	Botany 3	Botany 4	Botany 5
4:00	Phys. Training	Phys. Training	Phys. Training

Third Year.

8:00			Rhetoric 1
9:00	Economics 1	Economics 2	
11:00	Domestic Science 1	Domestic Science 2	Domestic Science 3
12:00	Gen. Physiology 1	Gen. Physiology 2	Gen. Physiology 3
2:00	M. & W. Dom. Sci. 4	Domestic Science 5	
2:00	T. & Th. Dom. Sci. 7	Domestic Science 8	
4:00	Phys. Training	Phys. Training	Phys. Training

Fourth Year.

8:00	Sociology 1	Sociology 2	Sociology 3
9:00	Sociology 5	Sociology 6	Sociology 7
10:00	Domestic Science 6	Sociology 8	Domestic Science 9
11:00		Rhetoric 2	English Lit. 2

The course outlined above may be varied to meet individual needs; but students who make Domestic Science their major study are advised to follow it as nearly as possible.

DESCRIPTION OF COURSES.

Included in the Domestic Science Course.

Rhetoric.

PROFESSOR PATTERSON AND MR. SMITH.

1 **Composition.** The work is almost wholly practical. Daily themes. Critiques in class. A number of book reviews and three long essays. In addition to the text-book work, special study of several prose masterpieces. It is intended that the student shall obtain a thorough practical knowledge of all matters of rule. Lectures.

Summer, Fall, 11:00; Spring, 8:00.

2 **Rhetoric.** In this course special attention is given to matters of taste. The student is required to read and make written reports upon a large number of masterpieces. Long essays. Extempore composition and criticism. Class study of several literary masterpieces. Lectures. In this quarter the professor endeavors to meet each member of the class as often as possible for consultation. Prerequisite, Rhetoric 1.

Winter, 11:00.

English Language and Literature.

PROFESSOR ARMSTRONG AND MR. HOLDEN.

2 **General Survey of English Literature.** This course is intended to be an introduction to the study of literature. Its purpose is to give the student a conception of the nature of literature, a general knowledge of the great field of literature, and a definite knowledge of a few English classics. Recitations and critiques on assigned readings. Brooke's "History of English Literature," and copies of complete masterpieces. Prerequisites, Rhetoric 1 and 2. Professor Armstrong. Summer, 11:00.

Mr. Holden. Fall, Spring, 11:00; 20 M.

History.

7 **History of Greece.** This course will trace the history of Greece from the beginning of the Persian wars to the Roman Conquest. The mythology of the Greeks, the contributions of earlier nations to the Greek civilization, will be treated in preliminary lectures. An effort will be made to give the students by means of lectures and collateral readings some acquaintance with the literature, philosophy and art of the Greeks.

Fall, 11:00; 4 M.

8 **History of Rome.** In this course a brief outline will be given of the development of the Roman Republic previous to the second century. In tracing the subsequent history of the republic, the following topics will receive special attention: the Agrarian question; the development of the Roman provincial system; the influence of Hellenism; the development of the popular and conservative parties, and the party struggles to the death of Caesar. In the history of the empire the following topics will be considered: the organization of the empire; the army; the rise of the Christian church; economic conditions; the frontiers and the contact of the empire with the barbarians.

Winter, 11:00; 4 M.

9 Mediæval History; The Rule of the Teutons. In this course an attempt is made, first, to picture the condition of the Roman Empire in the fourth, fifth and sixth centuries of the Christian era; next, to present the primitive life and institutions of our Teutonic ancestors; and then, with the career of the Frankish tribes as the central thread of the story, the history of Catholic Christian Europe down to the Renaissance is studied. Spring, 11:00; 4 M.

11 History of English Political Institutions. In this course a study will be made of the development of English political institutions under the following general heads: Anglo-Saxon institutions; feudal development in the pre-Norman and Norman periods; the administrative system under the Norman and Plantagenet Kings; the development of the representative system in the 13th century; the increase in parliamentary power during the 14th and the causes of the decline in the 15th century. Fall, 12:00; 4 M.

12 English Political Institutions A continuation of course 11. The topics to be considered are: causes and character of the Tudor absolutism; the revival of parliamentary independence in the latter half of the 16th century; the struggle between King and Parliament under the Stuarts; the Revolution Settlement; the development of the ministerial government; and the relation between England and her colonies. Winter, 12:00; 4 M.

18 History of Europe since 1815. In this course a study will be made first of the conditions at the beginning of the period and the settlements effected by the Congress of Vienna. The history of each country will then be traced with special reference to the working out of the principles of constitutional government and nationality. Spring, 12:00; 4 M.

Sociology.

PRESIDENT RAYMOND AND ASSISTANT PROFESSOR CLARK.

1 Anthropology. An elementary course on man as the unit of society, and on the evolution of society and social institutions. The general purpose of the course is to point out how man has developed into his present social state, what the influences were which caused this development, and how these influences themselves have evolved. The general subjects discussed are: first, the antiquity of man, and the place man occupies in nature; second, the origin and early development of institutions which have made man what he is, and upon which contemporary society is based, such as language and writing, the arts of life and of pleasure, religion and science, mythology and history, the family and social structure. Tylor's "Anthropology," supplemented by lectures and assigned readings. Summer, Fall, 8:00; 10 S.

2 Ethnology. A course on the races of mankind, with special reference to the social institutions of various peoples. The physical and mental differences of races are discussed; the various peoples of the world are classified; and the most important ethnographic problems are considered. Keane's "Ethnology" is used by the class, supplemented by lectures and the investigation of assigned topics. Prerequisite, Anthropology. Winter, 8:00; 10 S.

3 **Elements of Sociology.** A course on the structure and functions of contemporary society. Existing society is studied as an objective reality, the student's own world being his laboratory. The course begins with a series of elementary lectures on the methods of scientific social study; the relation of the individual to society; the social organism; the physical and psychical bases of society; the social forces; the field of sociology and its relation to social reform. Meanwhile the individual members of the class have been assigned certain social institutions for personal observation and study, upon which they report fully in the class. The purpose is to bring out prominently the leading features in the associated life of human beings as it actually exists. Lectures, assigned readings and reports. Prerequisites, Anthropology and Economics 1 and 2. Spring, 8:00; 10 S.

5 **Contemporary Charities.** The causes and conditions of poverty, methods of relief, historical and contemporary; special classes, children, the aged, unemployed, defective; charity organization. Warner's "American Charities." Lectures, research work.
Assistant Professor Clark. Fall, 9:00.

6 **The Treatment of Delinquents.** Causes of crime, criminal anthropology, history of methods of treatment, preventive measures, juvenile delinquents, legal factors. Lectures and assigned topics.
Assistant Professor Clark. Winter, 9:00.

7 **Social Movements of the Nineteenth Century.** A study of organized efforts for social betterment, their principles and results. This includes the investigation of movements affecting every phase of social life, hygienic, economic, artistic, educational, religious. Lectures, readings, and the development of assigned topics.
Assistant Professor Clark. Spring, 9:00.

8 **The Family.** The historical development of the family; its significance as a social institution; its organization; pathological conditions and suggested remedies. Assistant Professor Clark. Spring, 10:00.

Economics.

PRESIDENT RAYMOND.

1 **Historical Introduction to Economics.** A course in Economic History, designed to furnish a basis for the study of economic principles. The aim is to familiarize the student with the main facts in the development of modern industrial society before he begins to theorize about them. Gibbins' "Industrial History of England" will be used as a guide with supplementary assigned readings. Fall, 9:00.

2 **Principles of Economics.** An exposition of the fundamental laws of Political Economy. This is an elementary course, prerequisite to all advanced work in Economics. Ely's "Outlines of Economics," supplemented by lectures and assigned readings in the library.
Summer, Winter, 9:00; 10 S.

Physics.

PROFESSOR HODGES AND MR. WHITHAM.

4 **Experimental Physics.** A laboratory course exclusively, consisting of elementary quantitative experiments. Open to students who do not take Course 6. Sabine's "Laboratory Course in Physics."

Prerequisites, Physics 1 and 2, and Plane Trigonometry.

Full course, Summer, 2:00; 1 S.

May be taken in the Fall, Winter and Spring quarters, one-third course each quarter. Mondays, Wednesdays, 1:30; 1 S.

Chemistry.

PROFESSOR WHITEHILL AND ASSISTANT PROFESSOR FOLIN.

4 **Qualitative Analysis.** A laboratory course designed for students who are familiar with the elementary principles of Chemistry. It includes the preparation of the more important gases and salts, and the detection of the elements and their compounds.

Half course, first five weeks, Summer, 2:00;
One-third course, Fall, Tuesdays, Thursdays, 1:30; 22 S.

5 **Elementary Quantitative Analysis.** This course includes a small number of simple gravimetric, volumetric, and electrolytic determinations, together with the study of the operations involved. Laboratory course. Half course, second five weeks, Summer, 2:00;
One-third course, Winter, Tuesdays, Thursdays, 1:30; 22 S.

6 **Water and Food Analysis.** Analytical Chemistry as applied to domestic science. This course is in part identical with Course 8, but includes analysis of water and of foods.

Spring, Tuesdays and Thursdays, 1:30; 21, 22 S.

11 **Medical Organic Chemistry.** This is a lecture and laboratory course in such special subjects of Organic Chemistry as carbohydrates, fats, proteins, and foods in general, together with certain organic amido and other nitrogenous compounds. Fall, 10:00 to 12:00; 21 S.

12 **Physiological Chemistry.** This course is a continuation of Course 11 and includes lectures and laboratory work on ferments, digestion, respiration, nutrition and general animal metabolism.

Winter, 10:00 to 12:00; 21 S.

13. **Physiological Chemistry.** This course is a continuation of Course 12. Spring, 10:00 to 12:00; 21 S.

Zoölogy.

ASSISTANT PROFESSOR J. B. JOHNSTON.

1 **Elementary Zoölogy.** A study of types (Amoeba, Paramoecium, Sponge, Hydra, Earth worm) of the lower classes of animals with reference to structure, functions, and relationships, and of the cell and cell division. Laboratory work supplemented by lectures on the physiology of the cell.

Prerequisites: Two courses in Preparatory English Composition and Rhetoric, or satisfactory evidence of ability to write clear, forcible English.

Parker: Elementary Biology.
Wilson: The Cell in Development and Inheritance.
Hertwig: The Cell.

Hertwig : Zoölogy, Field's Translation.

Wilson : Chapters on Evolution.

Sedgwick and Wilson : Elementary Biology.

Fall, Lectures T., Th., at 10. Laboratory work six hours a week.

2 **Introduction to Vertebrate Zoölogy.** The structure and development of the frog, and the classification of vertebrates. This course should be taken by prospective medical students and by those intending to give especial attention to vertebrate zoölogy, during their first year of zoölogical work. Prerequisite, course 1.

Ecker's Frog, (preferably Gaup's edition).

Marshall : Embryology.

Macalaster : Zoölogy.

Parker and Haswell : Zoölogy, Vol. II.

Winter, Lectures T., Th., at 10. Laboratory work six hours a week.

3 **The Evolution of Species.** A presentation of the evidences of evolution, with an account of the current theories. Illustrated lectures and reading. This course may be taken as an introduction to all other courses in Zoölogy, or in the third quarter of the first year's work. It counts as a half course and may advantageously accompany course 4.

Spring, two lectures a week at an evening hour.

4 **Field Work.** Field excursions and laboratory work with reading and occasional lectures on the principles of classification and the distribution of animals. The work will consist of the collection, identification and preservation of specimens of the local fauna, and recording observations on the habits, and time and place of occurrence of animals in the vicinity of Morgantown. The aim will be to interest the students in the general problems of Zoölogy and in the materials and methods for their solution. 2 U.

Half course, designed to accompany course 3 in the third quarter of the first year's work, but may be taken to advantage at any subsequent time. Spring. Hours to be arranged.

Botany.

ASSISTANT PROFESSOR COPELAND.

3 **The Algæ.** The algæ will be studied along physiological as well as morphological lines. Being the simplest typical plants they are well adapted to serve as material for a thorough introductory study of the plant cell. One or two lectures weekly and eight or six hours laboratory work with microscope. Fall.

4 **Fungi and Bryophytes.** A study of the morphology and taxonomy of these groups. One lecture and eight hours laboratory work. Prerequisite, course 3. Winter.

5 **The Vascular Plants.** This course will be in considerable part laboratory work, bringing out the relation of the flowering plants to the lower groups, with some field work. One lecture weekly, and four laboratory periods. Prerequisite, course 4. Spring.

Physiology.

1 **General Physiology.** This course will treat of the fundamental principles underlying the functions of the cell, proceeding to cell aggregates or tissues, the blood, and the circulation. Fall, 12:00.

2 **General Physiology.** The functions of the lungs, of the alimentary tract, and of the excretory organs will be studied. Winter, 12:00.

3 **General Physiology.** The nervous system, the special senses and the physiology of reproduction will be treated during the third quarter of the year. Spring, 12:00.

Domestic Science.

ASSISTANT PROFESSOR CLARK AND MISS MORELAND.

1 **General Hygiene.** This is introductory to course 2, though complete in itself. Questions relating to the health of the individual are considered: the care of lungs, skin, eyes, digestion, the development of the body by indoor and outdoor exercise, the conservation of nervous and muscular force, and the conditions favorable for physical and intellectual work. Lectures and assigned readings. Fall, 11:00.

2 **Home Sanitation.** The house: site, architecture, construction, plumbing and sewerage, heating, lighting and ventilation, furnishing, decorating, cleaning. Lectures, topical investigation and inspection of houses. Winter, 11:00.

3 **Public Hygiene.** Among the subjects discussed are: the care of streets and alleys, system of sewage and garbage disposal, the inspection of food supplies, the prevention of epidemics, building and plumbing regulations, sanitary regulations. Lectures and research work. Spring, 11:00.

4 **Food Materials.** The sources of food supplies, composition and nutritive value of foods; adulterations. Lectures with the use of charts, models, etc. Half course. Summer, 1900, 12:00. Fall, M. & W. 2:00. Spring, M. & W. 2:00.

5. **Selection of Foods.** A continuation of course 4. The cost of food materials, national foods, dietaries, the chemistry of the preparation of food. Prerequisite, Domestic Science 4. Half course. Winter, M. & W., 2:00.

6 **Household Economics.** The organization of the household, domestic service, household expenditure, comparative study of family budgets, marketing. Fall, 10:00.

7 **Principles of Cooking.** This course is intended to illustrate the application of heat to foods and to show the value of the staple foods. Course 4 must accompany this. Half course. Summer, 1900, 2:00. Fall, T. and Th., 2:00. Spring, T. & Th., 2:00.

8 **Advanced Cooking.** A continuation of course 7. The preparation of more elaborate dishes and of entire meals. Prerequisite, Domestic Science 7. Course 5 must accompany this. Half course. Winter, T. & Th., 2:00.

9 **Household Art and Architecture.** The principles of house architecture with historical illustrations; the examination of house plans with reference to their beauty and convenience; a study of decoration and furniture. Spring, 10:00.

West Virginia University

MORGANTOWN, W. VA.

Supplementary Announcements

October 1, 1899

Morgantown, W. Va.
Published by the University

The Fall Convocation.

The Fall Convocation Sermon will be preached by Rev. Dr. A. M. Buchanan, in Commencement Hall, at 8 p. m., Sunday, October 1.

The Fall Convocation will be held in Commencement Hall at 8 p. m., Monday, October 2. The program will be as follows :

QUARTERLY REPORT by the President of the University ;

CONVOCATION ADDRESS

by

Dr. A. E. WINSHIP, Editor of the Journal of Education, Boston, Mass.

CONFERRING OF DEGREES.

Music will be furnished by the School of Music.

New Appointments

Since the Publication of the Catalogue.

LUCY CELESTE DANIELS, Ph. M., Associate Professor of European History.

B. L., University of Wisconsin, 1879; Ph. M., University of Chicago, 1895. Teacher at La Crosse, Wis., 1880-8, and in the Public Schools, Minneapolis, 1888-90; Instructor in English and Latin, Central High School, Minneapolis, 1890-92, and in the Girls' High School, Brooklyn, 1892-93; Instructor in History and Latin, Girls' Classical School, Indianapolis, 1893-4; Graduate student in Political Science and History, University of Minnesota, 1889-91, and University of Chicago, 1894-5; Instructor in History, Northwest Division High School, Chicago, 1895-6, and Lewis Institute, Chicago, 1896-9; Lecturer in History, West Virginia University, Summer Quarter, 1899.

OTTO FOLIN, Ph. D., Assistant Professor of Physiological Chemistry.

B. S., University of Minnesota, 1892; Ph. D., University of Chicago, 1896. Graduate student, University of Upsala, 1896, and Universities of Berlin and Marburg, 1897-8; Instructor in General and Medical Chemistry, McKillip Veterinary College, 1894-6; practical work in Columbus Medical and Food Laboratories, 1899.

JAMES DAVID THOMPSON, A. M., M. Sc., Assistant Professor of Mathematics.

Dalton Senior Mathematical Scholar, Owens College, Manchester, England, 1891; B. Sc. (1st in Mathematical Honors), Victoria University, England, 1892; M. Sc., *ibid.*, 1895; B. Sc., and University Exhibitioner in Mathematics, London University, 1893; A. B., (16th Wrangler, Mathematical Tripos), University of Cambridge, 1895; Natural Sciences Tripos, Part II, *ibid.*, 1896; Major Foundation Scholar, Trinity College, Cambridge, 1894-8; A. M., *ibid.*, 1899. Lecturer and Demonstrator in Physics, University College, Sheffield, England, 1896-8; Lecturer in Mathematics, *ibid.*, 1897-8; Lecturer in Applied Mathematics, Graduate School, University of Chicago, Autumn Quarter, 1898; Lecturer in Mathematics and Astronomy, West Virginia University, Summer Quarter, 1899.

EDWIN BINGHAM COPELAND, Ph. D., Assistant Professor of Botany.

A. B., Leland Stanford Junior University, 1895; A. M. and Ph. D., University of Halle, Germany, 1896. Assistant in Biology, University of Wisconsin, 1893-4; *ibid.*, Honorary Fellow in Botany, 1896-7; Assistant Professor of Botany, Indiana University, 1897-8; Teacher of Science, State Normal School, Chico, California, 1899.

HANNAH BELLE CLARK, Ph. D., Assistant Professor of Domestic Science, and Dean of Women.

A. B., Smith College, 1887; Ph. D., University of Chicago, 1897. Instructor, Dearborn Seminary, Chicago, 1887-93, and 1894-9.

JOHN BLACK JOHNSTON, Ph. D., Assistant Professor of Zoölogy.

Ph. B., University of Michigan, 1893; Ph. D., *ibid.*, 1899. Graduate student and Assistant in Zoölogy, *ibid.*, 1893-7; Instructor in Zoölogy, *ibid.*, 1897-9.

FLORENCE MADISON SLITER, Instructor in Violin.

Graduate, New England Conservatory of Music, 1898; Graduate student, and Instructor in Normal Department, *ibid.*, 1898-9.

EDWARD J. HENDERSON, Instructor in Mandolin, Guitar and Banjo.

Graduate under Henry C. Blackmar, New Orleans, 1887; instructor banjo, mandolin and guitar clubs, Tulane University, 1893-4; graduate Farland's National School for Banjo, 1894; Principal Banjo, Mandolin and Guitar Department, New Orleans College, 1894-6; director banjo, mandolin and guitar clubs, Western University of Pennsylvania, 1896-99.

WILLIAM HENRY WHITHAM, B. S., Fellow in Physics.

B. S., West Virginia University, 1899.

Standing Committees of The Faculty.

At the August (1899) meeting of the Board of Regents, the President of the University was authorized to appoint twenty-three standing committees, each committee to have power to act in its own field and in such other matters as may be referred to it by the President or faculty. In accordance with this authority the following committees have been appointed for the year 1899-1900:

1. WAYS AND MEANS. Whitehill, Emory, Fast, Truscott, Patterson.

2. STUDENT AFFAIRS. Atkeson, Hodges, Woolery, Fast, Patterson.

3. ADMISSION AND ADVANCED STANDING. Patterson, Hodges, Hare, Truscott, Daniels.

4. ENTRANCE REQUIREMENTS. Woolery, Reynolds, Johnson, Whitehill, Thompson.

5. SCHOLARSHIP. Emory, Woolery, Fast, Truscott, Patterson.

6. REGISTRATION. Armstrong, Brown, Miller, Stewart, Hare.

7. GRADUATION. Hare, Stewart, Armstrong, J. L. Johnston, Willey.

8. GRADUATE STUDY. Truscott, McKenzie, Whitehill, Emory, J. B. Johnston.

9. CHAPEL SERVICES. Reynolds, Ellenberger, Douthat, Stewart, Ohern.

10. LIBRARY. Skinner, Armstrong, Brown, Fast, Thompson.

11. MUSEUM. Brown, Hopkins, J. B. Johnston, Fast, Copeland.

12. SCIENTIFIC PUBLICATIONS. J. B. Johnston, Emory, Corbett, McKenzie, Folin.

13. PRIZES AND CONTESTS. Patterson, Armstrong, Fast, McKenzie, Clark.

14. LECTURES AND PUBLIC EXERCISES. Fast, Ellenberger, McKenzie, Daniels, J. B. Johnston.

15. UNIVERSITY EXTENSION. Barbe, Armstrong, Atkeson, Thompson, Fast.

16. ATHLETICS. Hodges, Printz, Copeland, J. B. Johnston, Whitehill.

17. WOMEN STUDENTS. Clark, Daniels, Skinner, Hubbard, McMurphy.

18. TEACHERS' BUREAU. Miller, Hodges, Patterson, McKenzie, Thompson.

19. STUDENTS' AID. Whitehill, Brooke, Hodges, Morris, Friend.

20. LEGISLATION. Fast, Johnson, Atkeson, Hodges, Whitehill.

21. BOARDING AND ROOMING PLACES. Armstrong, Whitehill, Emory, Willey, Friend.

22. ACCREDITED PREPARATORY SCHOOLS. Hodges, Woolery, Miller, Armstrong, Barbe.

23. BUILDINGS AND GROUNDS. Emory, Corbett, Morris, Copeland, Truscott.

Conditions of Admission,

Adopted by the Committee on Admission and Advanced Standing, Sept. 4, 1899.

Candidates for admission must present certificates of good moral character, and if from other colleges or universities must bring letters of honorable dismissal.

Entrance Subjects and Requirements.

For meeting the requirements for admission to the Freshman Class candidates are offered a choice of seventy-two courses in twenty-seven subjects. A "course" represents the amount of work done by a class meeting five times a week for one quarter (twelve weeks). The entrance subjects are all reduced to the unit of a course, and placed on exact equality. Thirty-nine courses will be accepted for admission in full standing, and these may be selected by the candidate from among the following seventy-two courses:

1.	English Grammar,	2 courses;
2.	English Composition and Rhetoric,	5 courses;
3.	English Literature,	2 courses;
4.	Latin,	9 courses;
5.	Greek,	6 courses;
6.	French,	6 courses;
7.	German,	6 courses;
8.	Ancient History,	1 course;
9.	Mediaeval and Modern History,	1 course;
10.	English History,	1 course;
11.	American History,	1 course;
12.	Arithmetic,	1 course;
13.	Elementary Algebra,	3 courses;
14.	Plane Geometry,	2 courses;

16.	Advanced Algebra,	1 course ;
17.	Solid Geometry,	1 course ;
18.	Botany,	2 courses ;
19.	Physics,	2 courses ;
20.	Chemistry,	3 courses ;
21.	Zoology,	3 courses ;
22.	Physical Geography,	2 courses ;
23.	Physiology,	1 course ;
24.	Astronomy,	1 course ;
25.	Drawing,	3 courses ;
26.	Mechanic Arts,	3 courses ;
27.	Military Science,	3 courses.

Not more than one course in Botany, Physics, Chemistry, or Zoology will be accepted for admission unless the work has been accompanied by laboratory or field work.

General Preparatory Schedules.

The regular Preparatory schedules for the year 1899-1900 will be as outlined below. In addition to the classes regularly scheduled here, there will be classes in the various subjects at other hours and in other quarters, for the convenience of students whose work is irregular. For information as to hours and quarters when these additional classes will meet, consult the departmental announcements on the following pages, or in the catalogue.

Two schedules have been arranged for the preparatory work :

(1) A four-year schedule for those who find it necessary to take all the work in the Preparatory School, and who are not able to carry more than three studies durihg the first three years of the course ;

(2) A three-year schedule for those who have satisfactorily passed in United States History, Physiology, and Arithmetic, before entering the Preparatory School, and who are able to carry four studies through out the three years.

I. Schedule Arranged for Four Years.

First Year.

Hour.	Fall.	Winter.	Spring.
8:00	English 1	English 2	English 3
9:00	Arithmetic	Physiology	American History
10:00	Physical Geog. 1	Botany 1, or Physical Geog. 2	Botany 2

Second Year.

9:00	Ancient History	Modern History	Algebra 1
10:00	English 4	English 5	English 6
11:00	Latin 1, or French 1	Latin 2, or French 2	Latin 3, or French 3

Third Year.

8:00	Algebra 2	Algebra 3	Plane Geometry 1
9:00	Greek 1, or German 1	Greek 2, or German 2	Greek 3, or German 3
10:00	Latin 4, or French 4, or Zoölogy 1, or English 7	Latin 5, or French 5, or Zoölogy 2, or English 8	Latin 6, or French 6, or Zoölogy 3 and 4, or English 9

Fourth Year.

8:00	Greek 4, or German 4	Greek 5, or German 5	Greek 6, or German 6
9:00	Latin 7, or Drawing 1, or Chemistry 1	Latin 8, or Drawing 2, or Chemistry 2 and 3	Latin 9, or Drawing 3, or Chemistry 4, or Plane Trigonometry
10:00	English 7, or Zoölogy 1	English 8, or Zoölogy 2	English 9, or Zoölogy 3 and 4, or Astronomy
11:00	Plane Geometry 2	Physics 1, or Solid Geometry	Physics 2, or Plane Trigonometry

II. Schedule Arranged for Three ars.

First Year.

Hour.	Fall.	Winter.	Spring.
8:00	English 1	English 2	English 3
9:00	Ancient History	Modern History	Algebra 1
10:00	Physical Geog. 1	Botany 1, or Physical Geog. 2	Botany 2
11:00	Latin 1, or French 1	Latin 2, or French 2	Latin 3, or French 3

Second Year.

8:00	Algebra 2	Algebra 3	Plane Geometry 1
9:00	Greek 1, or German 1, or Drawing 1	Greek 2, or German 2, or Drawing 2	Greek 3, or German 3, or Drawing 3
10:00	Latin 4, or French 4, or Zoology 1	Latin 5, or French 5, or Zoology 2	Latin 6, or French 6, or Zoology 3 and 4
11:00	English 4	English 5	English 6

Third Year.

8:00	Greek 4, or German 4	Greek 5, or German 5	Greek 6, or German 6
9:00	Latin 7, or Drawing 1, or Chemistry 1	Latin 8, or Drawing 2, or Chemistry 2 and 3	Latin 9, or Drawing 3, or Chemistry 4, or Plane Trigonometry
10:00	English 7, or Zoology 1	English 8, or Zoology 2	English 9, or Zoology 3 and 4, or Astronomy
11:00	Plane Geometry 2	Physics 1, or Solid Geometry	Physics 2, or Plane Trigonometry

Admission to the Engineering Courses.

The conditions of admission to the Engineering courses are the same as the conditions of admission to the courses leading to the degree of Bachelor of Arts ; but no student can complete either of the Engineering courses in four years unless his Preparatory course has included nine courses in English, seven courses in Mathematics, and two courses in Physics. Students who expect to take either of the Engineering courses are advised to follow in their Preparatory work one of the Engineering Preparatory Schedules given below.

Engineering Preparatory Schedules.

Two schedules have been arranged for the preparatory work :

(1) A four-year schedule for those who find it necessary to take all the work in the Preparatory School, and who are not able to carry more than three studies during the first three years of the course.

(2) A three-year schedule for those who have satisfactorily passed in United States History, Physiology, and Arithmetic, before entering the Preparatory School, and who are able to carry four studies throughout the three years.

I. Schedule Arranged for Four Years.

First Year.

Hour.	Fall.	Winter.	Spring.
8:00	English 1	English 2	English 3
9:00	Drawing 1	Drawing 2	Drawing 3, or U. S. History
11:00	French 1	French 2	French 3

Second Year.

9:00	Arithmetic	Physiology, or Modern History	Algebra 1
10:00	French 4	French 5	French 6
11:00	English 4	English 5	English 6

Third Year.

8:00	Algebra 2	Algebra 3	Plane Geometry 1
9:00	German 1	German 2	German 3
10:00	English 7	English 8	English 9

Fourth Year.

8:00	German 4	German 5	German 6
9:00	Chemistry 1	Chemistry 2 and 3	Chemistry 4, or Plane Trigonometry
10:00	Physical Geography 1	Physical Geography 2, or Botany 1	Botany 2, or Astronomy
11:00	Plane Geometry 2	Physics 1	Physics 2

II. Schedule Arranged for Three Years.

First Year.

Hour.	Fall.	Winter.	Spring.
8:00	English 1	English 2	English 3
9:00	Drawing 1	Drawing 2	Algebra 1
10:00	Phys. Geography 1	Phys. Geography 2, or Botany 1	Botany 2
11:00	French 1	French 2	French 3

Second Year.

8:00	Algebra 2	Algebra 3	Plane Geometry 1
9:00	German 1	German 2	German 3
10:00	French 4	French 5	French 6
11:00	English 4	English 5	English 6

Third Year.

8:00	German 4	German 5	German 6
9:00	Chemistry 1	Chemistry 2 and 3	Chemistry 4, or Plane Trigonometry
10:00	English 7	English 8	English 9
11:00	Plane Geometry 2	Physics 1	Physics 2

THE PREMEDICAL COURSE.

Admission to the Premedical Course.

Until July 1st, 1900, candidates for admission to the Premedical Course in full standing will be required to have completed the following Preparatory work :

English,	3 courses ;
Latin,	3 courses ;
German,	6 courses ;
Algebra,	2 courses ;
Plane Geometry,	2 courses ;
Physics,	2 courses ;
Chemistry,	3 courses ;
Zoölogy,	3 courses ;

These Preparatory studies may be taken in two years by following the schedule outlined below.

Premedical Preparatory Schedule.

FIRST YEAR.

HOUR.	FALL.	WINTER.	SPRING.
8:00	Algebra 1	Algebra 2	Plane Geometry 1
9:00	German 1	German 2	German 3
10:00	English 4	English 5	English 6
11:00	Latin 1	Latin 2	Latin 3

SECOND YEAR.

8:00	German 4	German 5	German 6
9:00	Chemistry 1	Chemistry 2 and 3	Chemistry 4
10:00	Zoölogy 1	Zoölogy 2	Zoölogy 22
11:00	Plane Geometry 2	Physics 1	Physics 2

After July 1, 1900, admission to the Premedical Course will require the same amount of Preparatory work as admission to the four years college course, viz : the twenty-four courses named above and fifteen additional Preparatory courses to be selected by the student.

The Premedical Course.

It is important that the student of medicine should have the most thorough possible scientific training before entering upon his special medical studies. To this end he should complete a four years college course, devoting his time largely to the natural sciences and the modern languages, preparatory to his medical course proper. The rapid growth of those medical colleges which require such courses for admission indicates the esteem in which such scientific training is held by the medical profession. It is the object of the Premedical Course to give the students of this University an opportunity to complete the scientific work preparatory to the medical studies proper, so that the medical course can be completed in two years thereafter. The studies in this course will be credited toward the bachelor's degree; and the prospective medical student is advised to arrange his college course so as to receive the certificate of completion of the Premedical Course at the same time that he takes his bachelor's degree. For the benefit of those students who cannot afford the time or money to complete the four years college course or its equivalent, the following schedule of the Premedical Course has been arranged so that all the studies in this course may be taken in two years.

It is expected that students who complete this Premedical Course will be able to secure the degree of M. D. in two years.

Schedule of the Two Years Premedical Course.

FIRST YEAR.

8:00	Botany 3	Botany 4	Botany 12
10:00	Bacteriology 1	Bacteriology 2	Histology 1
11:00	Anatomy 1	Anatomy 2	Histology 2
1:30	Chemistry 5	Chemistry 6	Chemistry 8

SECOND YEAR.

8:00	Materia Medica 1	Materica Medica 2	Nervous Anatomy 13
9:00	Pathology 1	Pathology 2	Embryology
10:00	Physiology 15	Physiology 16	Physiology 17
11:00	Physiol. Chem. 12	Physiol. Chem. 13	Physiol. Chem. 14

Degrees.

Honorary Degrees.

No honorary degrees are conferred.

Bachelor of Arts.

The degree of Bachelor of Arts will be conferred upon any student who satisfies all entrance requirements and satisfactorily completes forty-two college courses, of which at least ten courses (including a thesis) are in some one department of study, selected by the student as his major subject or specialty. The professor in charge of the student's major work will act as the student's class officer and adviser, and will have authority to require the completion of the major subject and also such minor subjects in other departments as he may consider necessary or advisable collateral work ; but such minor requirements will not exceed six courses. With the exception of these major and minor courses, all work is elective, and the student may, in consultation with his major professor, freely choose any subject taught in the University which his previous studies have prepared him to undertake ; but the recommendation of his major professor is necessary to graduation ; and no degree will be conferred upon any student who has not received credit for at least forty-two full college courses, and spent at least one University year (three quarters) in resident study at this University.

A student may elect Law as his major, but may not take more than ten courses (including a thesis) in Law to count toward the degree of B. A. A student who has received credit for nine (or, including a thesis, ten) courses in Law before receiving the degree of B. A. may finish the remainder of the Law course, and receive the degree of LL. B. by an additional year's work in Law, provided that in that time he is able to take all of the remaining courses required for the degree of LL. B.

Bachelor of Science in Civil Engineering.

The degree of Bachelor of Science in Civil Engineering will be conferred upon any student who satisfies all entrance requirements and satisfactorily completes the following forty-two college courses:

Rhetoric,	1 course ;
Economics,	2 courses ;
College Algebra,	1 course ;
Solid Geometry,	1 course ;
Analytic Geometry,	1 course ;

Calculus,	2 courses ;
Geology,	2 courses ;
Economic Geology,	1 course ;
Analytic Chemistry,	1 course ;
Physics,	3 courses ;
Descriptive Geometry,	2 courses ;
Projection Drawing,	1 course ;
Mechanical Drawing,	1 course ;
Land Surveying,	1 course ;
Mechanics,	2 courses ;
Strength of Materials,	1 course ;
Graphic Statics,	1 course ;
Stereotomy,	2 courses ;
Railroad Surveying,	1 course ;
Railroad Construction,	1 course ;
Roads, Streets and Pavements,	1 course ;
Dynamos and Motors,	1 course ;
Development and Utilization of Power,	2 courses ;
Experimental Engineering,	1 course ;
Metallurgy,	½ course ;
Mining,	½ course ;
Roofs and Bridges,	1 course ;
Bridge Design,	1 course ;
Hydraulics,	1 course ;
Sanitary and Municipal Engineering,	1 course ;
Railroad Economy,	1 course ;
Plans and Specifications,	½ course ;
Engineering Jurisprudence.	½ course ;
Civil Engineering,	1 course ;
Thesis,	1 course ;
Total,	42 courses.

Distribution of Work for the Degree of B. S. C. E.

First Year.

Hour.	Fall.	Winter.	Spring.
8:00			Rhetoric 1
9:00	Economics 1	Economics 2	
10:00	Solid Geometry	Algebra 4	Anal. Geom. 1
11:00	Geology 4	Geology 5	Projec. Drawing
1:30 T., Thur.	Anal. Chem. 5 (⅓)	Anal. Chem. 6 (⅓)	Anal. Chem. 7 (⅓)

Second Year.

8:00	Diff. Calculus	Int. Calculus	Mechanics 2
9:00	Land Surveying 2	Desc. Geometry 3	Desc. Geom. 4
10:00	Physics 6	Physics 7	Physics 8
11:00	Mech. Drawing, (½)	Mech. Draw. (½)	Ec. Geology 6
1:30 F.	Field Practice		Field Practice

Third Year.

8:00	R. R. Surveying 5	R. R. Construction 6	Graphic Statics 8
9:00	Mechanics 3	Str. of Materials 4	Dyn. and Motors 17
10:00	Stereotomy 13	Stereotomy 14	Roads, S. and P. 7
1:30 F.	Field Practice		Field Practice
8:00 S.	Exp. Mechanics 43 (⅓)	Testing Mater. 45 (⅓)	Power Meas. 44 (⅓)

Fourth Year.

8:00	Power 11	Power 12	Thesis
9:00	Metallurgy 15½ Mining 16	Hydraulics 17	R. R. Economy 20
10:00	Roofs and Bridges 12	Bridge Design 18	Plans and Spec. 21 Eng. Jurisprudence
11:00	Civil Eng. 19	San. and Munic. Eng'g	
1:30	Field Practice		Field Practice

Suitable drawing will accompany the various theoretical courses in Surveying, Stereotomy and Bridge Design.

When Field Practice is scheduled it will be considered as forming a part of a course in Surveying which it accompanies.

When a fraction in parenthesis follows the number of a course, it indicates the credit to be given for the course. When no such fraction follows a full course credit will be given.

The above arrangement gives ten courses in the Freshman year, eleven courses in the Sophomore year, ten courses in the Junior year, and eleven courses in the Senior year, making in all forty-two courses.

Bachelor of Science in Mechanical Engineering.

The degree of Bachelor of Science in Mechanical Engineering will be conferred upon any student who satisfies all entrance requirements and satisfactorily completes the following forty-two college courses :

Rhetoric,	1 course ;
Economics,	2 courses ;
College Algebra,	1 course ;
Solid Geometry,	1 course ;
Analytic Geometry,	1 course ;
Calculus,	2 courses ;
Geology,	2 courses ;
Analytic Chemistry,	1 course ;
Physics,	3 courses ;
Descriptive Geometry,	1 course ;
Mechanics,	2 courses ;
Strength of Materials,	1 course ;
Mechanic Arts,	3 ¾ courses ;
Mechanism and Machinery,	2 courses ;
Machine Design,	2 courses ;
Mechanical Engineering Designing,	¾ course ;
Drawing and Design,	1 ½ courses ;
Valves and Valve Gears,	¾ course ;
Steam Engine Design,	¾ course ;
Steam Boilers, Heating and Ventilating,	1 course ;
Dynamo Electric Machinery,	1 course ;
Electrical Engineering,	1 course ;
Hydraulics,	1 course ;
Development and Utilization of Power,	2 courses ;
Thermodynamics of Engineering,	1 course ;
Prime Movers,	1 course ;
Power Transmission,	1 course ;
Hydraulics,	1 course ;
Engineering Jurisprudence,	½ course ;
Experimental Engineering,	1 course ;
Thesis,	1 course ;
Total,	42 courses.

Distribution of Work for the Degree B. S. M. E.

First Year.

Hour.	Fall.	Winter.	Spring.
8:00			Rhetoric 1
9:00	Economics 1	Economics 2	
10:00	Solid Geometry	Algebra 4	Anal. Geom. 1
11:00	Geology 4	Geology 5	Desc. Geom.
1:30 T., Thur.	Anal. Chem. 5 (⅓)	Anal. Chem. 6 (⅓)	Anal. Chem. 7 (⅓)
8:00 S.	Woodworking 1 (¼)	Woodturning 2 (¼)	Pattern Making 3 (¼)

Second Year.

8:00	Diff. Calculus	Int. Calculus	Mechanics 2
10:00	Physics 6	Physics 7	Physics 8
11:00	Mechanism 34	Mechanism 35	Machine Design 30
1:30 M., W.	Mech. Drawing 21	Mech. Drawing 22	Mech. Drawing 23
1:30 F.	Forging 4 (¼)	Foundry 5 (¼)	Tin Smith and Pipe Fitting 6, (¼)
8:00 S	Machine Work 7 (¼)	Machine Work 8 (¼)	Machine Work 9 (¼)

Third Year.

8:00	Power 11	Power 12	Thermodynamics 37
9:00	Mechanics 3	Str. of Materials 4	Dyn. and Motors 17
10:00	Valves and Valve Gears 32	Steam Boilers 38	Machine Design 31
1:30 T., Thur.	Machine Work 10 (¼)	Machine Work 11 (¼)	Machine Work 12 (¼)
1:30 F.	Mach. Drawing 24	Mach. Draw. 25	Mach. Draw. 26
8:00 S.	Exp. Mechanics 43 (⅓)	Testing Mater. 45 (⅓)	Power Meas. 44 (⅓)

Fourth Year.

8:00	Prime Movers 41	M. E. Design 33 (¾)	Thesis
9:00	St. Eng. Design 36 (¾)	Hydraulics 17	Power Trans. 42
10:00	Dyn. Elec. Mach. 49	Elect. Eng'g.	Eng'g. Juris. (½)
1:30 M. W. Fr.	Drawing and Design 27 (½)	Drawing and Design 28 (½)	Drawing and Design 29 (½)
1:30 T., Thur.	Mech. Const. 13 (¼)	Mech. Const. 14 (¼)	Mech. Const. 15 (¼)
8:00 S.	Eng. Lab. 46	Eng. Lab. 47	Eng. Lab. 48

Hereafter one hundred and sixty hours of drawing room or shop work will count as the equivalent of a full course.

Mechanical Drawing in the Sophomore year and Machine Drawing in the Junior year will be considered as forming a part of the respective courses in Machine Design and Mechanism which they may accompany. Engineering laboratory courses 46, 47, and 48 form a part of Mechanical Engineering courses 41, 33, and 42 respectively. When taken alone they will each count as one-third of a course.

In the above schedule when the credit to be given for any course is not unity, the number of the course is followed by a fraction in parenthesis indicating the amount of credit to be given.

The above arrangement gives 10 ¾ courses in the Freshman year, 10 ½ courses in the Sophomore year, 10 ½ courses in the Junior year, and 10 ¼ courses in the Senior year, making in all forty-two courses.

Optional courses in Mechanical and Electrical Engineering will be arranged later for the Senior year's work.

Owing to the destruction of the Mechanical Building by fire, instruction in the Mechanical Arts and in Experimental Engineering will not be given until the new Mechanical Building is completed. It is hoped that this building will be ready for occupancy by October 1, 1900.

Mechanical Engineering courses 27 and 51 will not be given until after July 1, 1900.

No Engineering degree will be conferred upon any student who has not taken at least three courses in French, three courses in German, two courses in General Chemistry, and one course in Free Hand Drawing; but when such courses have been taken after the preparatory requirements have been met, the student may omit not more than three of the prescribed college courses.

Students in the Mechanical Engineering course who offer Mechanic Arts for admission will elect an equivalent amount of work in place of college Mechanic Arts.

Credit for Military Science.

No student will receive credit for more than six full courses in Military Science.

Students who present Military Science for admission will not receive college credit for more than the number of additional courses needed to make up the six courses.

Theses.

In addition to the thesis requirements stated on pages 26–7 of the catalogue for 1898–9, the Committee on Graduation has prescribed the following regulations regarding theses:

1. The thesis must be written on some topic in the student's major department of study. Including his thesis, a student must take ten courses in his major department.

2. The subject of the thesis shall be selected in consultation with the major professor, not later than six months before the degree is conferred.

3. The preparation of the thesis shall count as one course, and if the thesis is uncompleted at the beginning of the last quarter before the degree is conferred, the student shall not take more than two additional courses during that quarter.

4. The student shall submit to his major professor, not later than two months before the degree is conferred, the bibliography of his subject, and an outline of his thesis.

5. The first draft of the thesis shall be submitted to the major professor not later than thirty days before the degree is conferred.

6. The final draft shall be submitted to the major professor not later than two weeks before the degree is conferred.

Fellowships.

At the August meeting of the Board of Regents, the President of the University was authorized to appoint, on or before July 1, 1900, ten University Fellows, for the University year 1900–1, in departments where Fellows are most needed. The regulations governing these Fellowsnips are stated on page 34 of the catalogue for 1898–9. In making appointments to these Fellowships, special weight is given to theses indicating the candidate's ability to do independent work. The candidate for a Fellowship must show proficiency already obtained in the department of study in which he applies for a Fellowship. Preference will be given, in making these appointments, to those students who have taken their major work, including a thesis, in the department in which they apply, and who intend to make that subject their life work. It is very desirable that the student should have spent a year in resident study after receiving his Bachelor's degree.

Each Fellow will make to the President, at the beginning of each quarter, a written report, approved by the head of his department, indicating the courses chosen by him as a student, and the work assigned to him as an officer of the University, for the current quarter and for the previous quarter.

SUPPLEMENTARY DEPARTMENTAL ANNOUNCEMENTS.

Philosophy.

The classes in the Department of Philosophy will meet during the year 1899-1900 at the following hours :

1 **Elements of Psychology.** Fall, 8:00 ; 23 S.

2 **Comparative Psychology and Mental Development.** Winter, 8:00 ; 23 S.

3 **Elements of Logic and Principles of Science.** Spring, 8:00 ; 23 S.

4 **Elements of Ethics.** Fall, 10:00 ; 23 S.

5 **Comparative Ethics.** Winter, 10:00 ; 23 S.

6 **Comparative Religion.** Spring, 10:00 ; 23 S.

7 **History of Ancient Philosophy.** Fall, 12:00 ; 23 S.

8 **History of Mediæval Philosophy.** Winter, 12:00 ; 23 S.

9 **History of Modern Philosophy.** Spring, 12:00 ; 23 S.

Sociology.

In addition to the courses offered in the catalogue, the following new courses will be given :

6 **Contemporary Charities.** The causes and conditions of poverty, methods of relief, historical and contemporary ; special classes, children, the aged, unemployed, defective ; charity organization. Warner's American Charities. Lectures, research work. Miss Clark. Fall, 12:00.

7 **The Treatment of Delinquents.** Causes of crime, criminal anthropology, history of methods of treatment, preventive measures, juvenile delinquents, legal factors. Henderson's Dependents, Defectives and Delinquents. Lectures and assigned topics. Miss Clark. Winter, 12:00.

8 **Voluntary Associations for Social Improvement.** A study of organized efforts for social betterment, their principles and results. This includes the investigations of movements affecting every phase of social life, hygenic, economic, artistic, educational, religious. Lectures, readings, and the development of assigned topics.
Miss Clark. Spring, 12:00.

Greek Language and Literature.

PROFESSOR WOOLERY AND MR. OHERN.

The college courses in Greek during the year 1899-1900 will be the same as given in the catalogue, pages 73-4, but the numbers of the courses will be as follows :

10 **Homer's Iliad or Odyssey (Books I, II and III,) and Homeric Verse.** Spring, 8:00.

11	**Plato's Gorgias.**	Fall, 10:00.
12	**Demosthenes' Olynthiacs and Philippics.**	Winter, 10:00.
13	**Aschylus' Prometheus Bound.**	Spring, 10:00.
14	**Lucian's Shorter Dialogues.**	Fall, 8:00.
15	**Lucian's Longer Dialogues.**	Summer, 10:00; Winter, 8:00.
16	**Herodotus and Thucydides.**	Fall, 11:00.
17	**New Testament Greek.**	Winter, 11:00.
18	**Modern Greek.**	Spring, 11:00.
20	**Seminary in Greek.**	

Fall, Winter and Spring, Bi-Weekly, Monday, 2:00-4:00 P. M.

Latin Language and Literature.

PROFESSOR DOUTHAT.

The college courses in Latin during the year 1899-1900 will be the same as given in the catalogue, pages 74-5, but the numbers of the courses will be as follows:

10	**Virgil's Eclogues and Georgics.**	Summer, 11:00.
11	**Horace's Odes.**	Fall, 11:00.
12	**Aulus Gellius' Stories.**	Winter, 11:00.
13	**Ciceros's De Amicitia and De Senectute.**	Spring, 11:00.
14	**Livy, Book XXI.**	Summer, 9:00.
15	**Horace's Satires and Epistles.**	Fall, 9:00.
16	**Cicero's Letters.**	Winter, 9:00.
17	**Cicero's De Officiis and De Oratore.**	Spring, 9:00.
18	**Early Latin.**	Summer, 8:00.
19	**Plautus: Captivi, Trinummus, and Rudens.**	Fall, 9:00.
20	**Juvenal.**	Winter, 8:00.
21	**Pliny's Letters.**	Spring, 8:00.
22	**Tacitus: Germania and Agricola.**	Summer, 10:00.
23	**Quintilian.**	Fall, 10:00.
24	**Seneca.**	Winter, 10:00.
25	**Petronius.**	Spring, 10:00.
26	**Synoptic Lectures.**	Spring, Thursdays, 8:00 P. M.

Mathematics.

The classes in Mathematics during the year 1899-1900 will be as follows :

Preparatory Courses.

Algebra.

ASSISTANT PROFESSOR THOMPSON AND MR. JOHNSON.

1 **Algebra,** up to and including Simple Equations. Charles Smith's Elementary Algebra. Fall, 8:00 ; Winter, 11:00 ; Spring, 9:00.

2 **Algebra,** up to and including Quadratics. Charles Smith's Elementary Algebra. Fall, 8:00 ; Winter, 8:00 ; Spring, 11:00.

3 **Algebra,** including Progressions and Logarithms. Charles Smith's Elementary Algebra. Winter, 8:00 ; Spring, 11:00.

Plane Geometry.

ASSISTANT PROFESSOR THOMPSON.

1 **Plane Geometry.** The first two books. Wentworth's Plane Geometry. Fall, 9:00 ; Spring, 8:00.

2 **Plane Geometry.** Completed. Wentworth's Plane Geometry. Fall, 11:00 ; Winter, 9:00.

College or Preparatory.

PROFESSOR STEWART AND ASSISTANT PROFESSOR THOMPSON.

4 **Algebra,** including Permutations and Combinations, Binomial Theorem, Exponential and Logarithmic and other Series. Wells' University Algebra.
Professor Stewart, Fall, 11:00 ; Winter, 9:00 ; 3 M.

Hall and Knight's Higher Algebra.
Assistant Professor Thompson, Winter, 10:00.

1 **Plane Trigonometry.** Wells' Revised Trigonometry.
Professor Stewart, Fall, 10:00 ; Spring, 9:00, 11:00 ; 3 M.

3 **Solid Geometry.** Wells' Revised Geometry.
Professor Stewart, Fall, 9:00 ; Winter, 11:00 ; 3 M.
Assistant Professor Thompson, Fall, 10:00.

Advanced College Courses.

PROFESSOR STEWART.

1 **Analytic Geometry.** Through Conic Sections. Nichol's Analytic Geometry. Fall, 8:00 ; Spring, 10:00 ; 3 M.

2 **Analytic Geometry.** Higher Plane Curves and Solid Analytic Geometry. Nichol's Analytic Geometry. Winter, 10:00 ; 3 M.

1 **Differential Calculus.** Differentiation of Functions, Evaluation of Indeterminate Forms. Expansion of Functions into Series. Maxima and Minima. Singular Points. Curve Tracing. Taylor's Revised Calculus. Winter, 8:00 ; 3 M.

2 Integral Calculus. Integration of Functions; Areas of Surfaces. Volumes of Solids. Center of Mass. Moment of Inertia. Ordinary Differential Equations. Taylor's Revised Calculus.

Spring, 8:00 ; 3 M.

5 Theory of Equations. General Theory of Equations. Solution of Higher Numerical Equations. Cordan's and Horner's Methods. Graphic Algebra. Macnie's Algebraical Equations.

Hours to be arranged

2 Spherical Trigonometry, with applications to Navigation and Astronomy. Wells and Bowser's Trigonometry. Hours to be arranged.

Astronomy.

ASSISTANT PROFESSOR THOMPSON.

1 Astronomy. An elementary course, which may be credited either as a preparatory or college course. Young's Lessons in Astronomy. Prerequisites : Plane Geometry and Elementary Physics

Spring, 10:00.

Physics.

PROFESSOR HODGES AND MR. WHITHAM.

1 Elementary Physics. Mechanics and Heat. Recitations, supplemented by experiments and laboratory exercises. One hour per week at least will be devoted to individual laboratory work. Wentworth and Hill's Text Book of Physics. Prerequisite, Plane Geometry.

Winter, 11:00 ; 11 S.

2 Elementary Physics. Electricity and Magnetism. Sound and Light. Continuation of Course 1. Spring, 11:00 ; 11 S.

Courses 1 and 2 will satisfy the entrance requirements in Physics. Students in the College who have not presented work in Physics among their entrance requirements, may receive college credit for these courses.

4 Experimental Physics. A laboratory course exclusively, consisting of elementary quantitative experiments Open to students who do not take Course 6. Sabine's Laboratory Course in Physics.

Prerequisites, Physics 1 and 2, and Plane Trigonometry.

Full course, Summer, 2:00 ; 1 S.

May be taken in the Fall, Winter and Spring quarters, one-third course each quarter. Mondays, Wednesdays, 1:30 ; 1 S.

6 General Physics. Mechanics. Lectures and recitations, accompanied by individual laboratory work, which, though elementary, is strictly quantitative. Required of candidates for Engineering degrees.

Ames' Theory of Physics. Prerequisite, Mathematics 3.

Summer. Lectures : Monday, Wednesday, Friday, 9:00 ; 11 S.
Laboratory : Tuesday, Thursday, 2:00 ; 1 S.
Fall. Lectures : Monday, Wednesday, Friday, 10:00 ; 11 S.
Laboratory : Tuesday, Thursday, 10:00 and 1:30 ; 1 S.

7 General Physics. A continuation of Course 6. Sound, Heat, and Light. Lectures and Laboratory work.

Winter. Lectures : Monday, Wednesday, Friday, 10:00 ; 11 S.
Laboratory ; Tuesday, Thursday, 10:00 and 1:30 ; 1 S.

8 General Physics. A continuation of course 7. Electricity and Magnetism. Lectures and Laboratory work.

Students who have not taken Course 7 may be admitted to this course, if they have taken Course 6.

Spring. Lectures : Monday, Wednesday, Friday, 10:00 ; 11 S.
Laboratory : Tuesday, Thursday, 10:00 and 1:30 . 1 S.

10 Sound. Advanced theoretical work. Lectures and Laboratory exercises. Prerequisites : Physics 6, Mathematics 6.

Half course, first term, Fall, 9:00 ; 11 S.

11 Light. Lectures and laboratory measurements.
Prerequisites, Physics 6, Mathematics 6.

Half course, second term, Fall, 9:00 ; 11 S;

12 Electrical Measurements. Advanced laboratory work. The student uses measuring instruments of precision, sensitive galvanometers, apparatus for accurate measurement of resistance, current, electromotive force, induction, magnetic properties of iron, etc. Carhart and Patterson's Electrical Measurements.

Prerequisites, Physics 8, Mathematics 6.

One-third course, Spring, Monday, Wednesday, 1:30 ; 1 S.

17 Dynamos and Motors. The elements of the general theory of dynamos and motors. Lectures and laboratory work.

Prerequisite, Physics 8, Course 12 may be substituted for the laboratory work of this course.

Spring. Lectures : Monday, Wednesday, Friday, 9:00 ; 11 S.
Laboratory : Tuesday, Thursday, 1:30 ; 1 S.

19 Practical Electricity. Synoptic Lectures. Open to all College students. One-third course. Winter, 1900, 7 P. M. ; 11 S.

No credit for this course will be allowed students who have credit for any of the regular College courses in this department.

20 Special Work. Students desiring to pursue any line of special work in the Department of Physics will be given opportunity to do so to the extent that the time of the instructors and the laboratory equipment will permit. Credit for such work will be allowed in proportion to the work done.

Chemistry.

PROFESSOR WHITEHILL AND ASSISTANT PROFESSOR FOLIN.

1 Inorganic Chemistry. This course is designed for beginners, and serves as a general introduction to chemical methods and operations. It includes a systematic study of the laws of chemical combinations, the source, preparation, properties and compounds of the non-metallic elements and the principles and theories of chemical philosophy. Experimental lectures, laboratory work, and recitations.

Summer, 10:00 ; Fall, 9:00 ; Spring, 10:00 ; 20 S.

2 Inorganic Chemistry. This course includes the study of the metallic elements, and special attention is paid to the application of Chemistry in Agriculture, Engineering, Medicine, and every-day life. Lectures, Laboratory work, and recitations. Half course.

First term, Summer and Winter, 9:00 ; First term, Fall, 10:00 ; 20 S.

3 **Organic Chemistry.** This course includes the study of the more important organic compounds, together with the laboratory processes for the preparation of such compounds. Lectures, laboratory work, and recitations. Half course.

Second term, Summer and Winter, 9:00 ; Second term, Fall, 10:00 ; 20 S.

4 **Advanced General Chemistry.** This course is designed to supplement the work of the Fall and Winter quarters, and includes both theoretical and laboratory work. It is preparatory to the regular courses in quantitative and qualitative analysis.

Prerequisites, Two quarters work in General Chemistry.

Spring, 9:00 ; 20 S.

5 **Qualitative Analysis.** A laboratory course designed for students who are familiar with the elementary principles of Chemistry. It includes the preparation of the more important gasses and salts, and the detection of the elements and their compounds.

Half course, first term, Summer, 2:00 ;
One-third course, Fall, Tuesdays, Thursdays, 1:30 ; 22 S.

6 **Elementary Quantitative Analysis.** This course includes a small number of simple gravimetric, volumetric, and electrolytic determinations, together with the study of the operations involved. Laboratory course. Half course, second term, Summer, 2:00 ; 22 S.
One-third course, Winter, Tuesdays, Thursdays, 1:30 ; 22 S.

7 **Analysis of Coal, Coke and Water.** This course is designed especially for Engineering students, but is open to others who have the necessary preliminary training. Laboratory course. One-third course.

Spring, Tuesdays, Thursdays, 1:30 ; 21, 22 S.

8 **Toxicology.** Especially designed for medical students. The course will include a study of inorganic and organic poisons, their physiological effects and antidotes. Laboratory course.

Spring, Tuesdays and Thursdays, 1:30 ; 21, 22 S.

9 **Water and Food Analysis.** Analytical Chemistry as applied to domestic science. This course is in part identical with Course 8, but in-analysis of water and of foods.

Spring, Tuesdays and Thursdays, 1:30 ; 21, 22 S.

10 **Quantitative Analysis.** This course is designed for students who expect to make Chemistry a specialty. It includes exercises in determining the composition of ores, minerals, and various technical compounds. Instruction is also given in assaying, gas analysis, and in the analysis of iron and steel. Exercises are selected to give as wide an acquaintance as possible with laboratory methods. One-third course each quarter.

Summer, Fall, Winter, Spring, Mondays, Wednesdays, 1:30 ; 21, 22 S.

11 **Iron Ores, Pig Iron, and Steel.** This course includes practice in the special methods of analysis of ores, pig iron and steel in use in the laboratories of the iron and steel works located in West Virginia and Western Pennsylvania. One-third course.

Summer, Fall, Winter, Spring, Tuesdays, Thursdays, 1:30 ; 21 S.

12 **Medical Organic Chemistry.** This is a lecture and laboratory course in such special subjects of organic Chemistry as carbohydrates, fats, proteins, and foods in general, together with certain organic amido and other nitrogenous compounds. Fall, 10:00 to 12:00 ; 21 S.

13 Physiological Chemistry. This course is a continuation of Course 11 and includes lectures and laboratory work on ferments, digestion, respiration, nutrition and general animal metabolism.

Winter, 10:00 to 12:00; 21 S.

14 Medical Analysis. This course includes a study and practice of all the essential analytical methods as used in modern practice of medicine. Spring, 10.00 to 12:00; 21 S.

The time announced for Courses 12, 13, and 14 is subject to change.

15 The Chemistry of Every-day Life. A course of synoptic lectures, including a study of fundamental facts and principles of Chemistry, fully illustrated by experiments.

One-third course, Fall, Tuesdays, 8:00 P. M.; 20 S.

20 Research Work. Chemistry offers a wide field for investigation. Special work in any of the various departments of the science may be taken in the laboratory under the direction of the instructors, and credit will be given in proportion to the amount of work accomplished.

21, 22 S.

For courses in Agricultural Chemistry, see announcements of the College of Agriculture in catalogue, page 135.

Botany.

ASSISTANT PROFESSOR COPELAND.

1 Elementary Laboratory Botany. This is very largely a laboratory course, with dissecting and compound microscopes, and including some simple experiments. A text book will be used only for a general guide. Fall, Winter, 10:00.

2 Elementary Field Botany. This course is chiefly outdoor work, and will include practice in the determination of vascular plants.

Spring, Summer, 10:00.

Courses 1 and 2 may both be presented for entrance credit in Botany. Either may precede the other, but they should be taken in successive terms.

3 The Algæ. The algæ will be studied along physiological as well as morphological lines. Being the simplest typical plants they are well adapted to serve as material for a thorough introductory study of the plant cell. One lecture weekly and eight hours laboratory work with microscope. Fall.

4 Fungi and Archegoniates. A study of the morphology and taxonomy of these groups. One or two lectures and eight or six hours laboratory work. Prerequisite, course 3. Winter.

5 The Spermaphytes. This course will be in considerable part laboratory work, bringing out the relation of the flowering plants to the lower groups with some field work. One lecture weekly, and four laboratory periods. Prerequisite, course 4. Spring.

6 The Epidermal and Fundamental Tissues. A study of the structure and functions of the tissues of these two systems, with an introduction to histological methods. No text. Prerequisite, course 5.

Fall.

7 The Fibrovascular System. A study of the conducting tissues of plants along the lines outlined under course 6, which is a prerequisite. Winter.

8 Cytology. A study of the protoplasm and nucleus, with drill in the technique of hardening, staining, etc. Prerequisite, course 7. Spring.

9 Physical Physiology. A study of the physical properties of plants and of the processes which depend essentially upon physical actions, as imbibition, osmosis, transpiration. No text. One or two lectures weekly, and laboratory experiments. Students must be ready to work at extra or unusual hours if the experiments demand it. Prerequisites, Botany 8, four courses of Chemistry and Physics, three of Zoology, and ability to read scientific German. Fall.

10 Chemical Physiology. Experiments on the nutrition and respiration of plants, with two lectures weekly. Prerequisite, course 9. Winter.

11 Growth and Irritability. This course completes the class study of vegetable physiology. One lecture weekly and experiments. Prerequisite, course 10. Spring.

12 Premedical Botany. This course may be elected by premedical students who have completed Botany 4. Like Botany 5, it will deal with the Spermaphytes, but with special attention to medicinal plants. Lectures and laboratory and field work. Spring.

13 Teacher's Course. This is to be a one term resume covering the ground to which at least two terms should be devoted in the preparatory schools. Two lectures a week on general Botany, with laboratory and field work. No previous Botany required. Winter, Summer.

14 Embryology. Ontology of typical archegoniates and spermaphytes. Prerequisite, Botany 8. Summer.

20 Research. Students prepared to do original work in physiology or histology will be given such opportunities as the equipments of the laboratories permit, and credit will be given in proportion to the amount of work accomplished,

Zoölogy, Anatomy, and Physiology.

ASSISTANT PROFESSOR JOHNSTON.

For students intending to specialize in Zoölogy, it is expected that Courses 1, 2, 3, and 4 will constitute the first year's work. Courses 9, 10, 11, 12 are intended for advanced undergraduates or graduates.

Under the description of each course are given the names of several books for reference which are found in the library and will be of especial value in connection with the given course.

1 Elementary Zoölogy. A study of types (Amoeba, Paramoecium, Sponge, Hydra, Earth worm) of the lower classes of animals with reference to structure, functions, and relationships, and of the cell and cell-division. Laboratory work supplemented by lectures on the physiology of the cell.

Prerequisite : Two courses in preparatory English Composition and Rhetoric, or satisfactory evidence of ability to write clear, forcible English.

Parker : Elementary Biology.
Wilson : The Cell in Development and Inheritance.
Hertwig : The Cell.
Hertwig : Zoölogy, Field's Translation.
Wilson : Chapters on Evolution.
Sedgwick and Wilson : Elementary Biology.
Fall, Lectures T., Th. at 10. Laboratory work, six hours a week.

2 **Introduction to Vertebrate Zoölogy.** The structure and development of the frog, and the classification of vertebrates. This course should be taken by prospective medical students and by those intending to give especial attention to vertebrate zoölogy, during their first year of zoölogical work.

Prerequisite, Course 1.

Ecker's Frog (preferably Gaup's edition).

Marshall : Embryology.

Macalaster : Zoölogy.

Parker and Haswell : Zoölogy, Vol. II.

Winter, Lectures T., Th., at 10. Laboratory work six hours a week.

3 **The Evolution of Species.** A presentation of the evidences of evolution, with an account of the current theories. Illustrated lectures and reading... This course may be taken as an introduction to all other courses in Zoology, or in the third quarter of the first year's work. It counts as a half course and may advantageously accompany Course 4. Spring, two lectures a week at an evening hour.

4 **Field Work.** Field excursions and laboratory work with reading and occasional lectures on the principles of classification and the distribution of animals. The work will consist in the collection, identification and preservation of specimens of the local fauna, and recording observations on the habits, and time and place of occurrence of animals in the vicinity of Morgantown. The aim will be to interest the student in the general problems of Zoölogy and in the materials and methods for their solution.

Half course, designed to accompany Course 3 in the third quarter of the first year's work, but may be taken to advantage at any subsequent time. Spring. Hours to be arranged.

5 **Mammalian Anatomy.** Dissection of the cat. The course is conducted with especial reference to human anatomy, and is intended as an introduction to human anatomy and physiology, or as a general culture course for those who can not pursue human dissection. Laboratory work, quizzes, and lectures or demonstrations.

Prerequisite, Course 1. Winter. Hours to be arranged.

6 **Mammalian Anatomy.** Continuation of Course 5.
Spring. Hours to be arranged.

7 **Invertebrate Zoölogy.** A study of the structure, development, relationships, habits and distribution of invertebrate animals, with especial reference to the principles of organic evolution.

Prerequisites, Courses 1, 3, and 4.

Parker and Haswell : Zoology, Vol. I.
Lang : Comparative Anatomy of Invertebrates.
Korscheldt and Heider : Comparative Embryology of Invertebrates.
McMurrich : Invertebrate Morphology.
Fall. Lectures twice a week. Laboratory work six hours.

8 Invertebrate Zoölogy. Continuation of Course 7. Winter.

9 Vertebrate Zoölogy. A study of the comparative anatomy, habits and distribution of vertebrates, with especial reference to their phylogenetic development. Lectures, laboratory work and reading.
Prerequesites, Courses 1, 2, 3, and 4, or 1, 5, and 6, Fall.

10 Vertebrate Zoölogy. Continuation of Course 9. Winter.

11 Vertebrate Embryology. Laboratory work on the maturation, fertilization and cleavage of the ovum, and on the development of the chick ; lectures and assigned reading on the comparative embryology of vertebrates. Spring.

12 Anatomy of the Nervous System. A comparative study of the minute anatomy of the central system and the morphology of the cranial nerves. Lectures, laboratory work, and reading.
Prerequisites, Courses 9 and 10. Spring.

13 Human Anatomy. Dissection or the human subject, with quizzes and demonstrations.
Prerequisites, Courses 2 and 22, or 5 and 6.
Fall. Hours to be arranged.

14 Human Anatomy. Continuation of Course 13.
Winter. Hours to be arranged.

15 Human Physiology. Prerequisites, Courses 13 and 14 and a course in Histology. Fall. Lectures at hours to be arranged.

16 Human Physiology. Continuation of Course 15.
Winter. Lectures at hours to be arranged.

17 Laboratory Course in Physiology. Prerequisites, Courses 15 and 16. Spring. Hours to be arranged.

20 Research Work. Properly qualified students may undertake research upon the anatomy or development of vertebrates or invertebrates. At least two years of zoölogical work and a reading knowledge of French and German are prerequisite.

21 Current Literature. A Journal Club for the consideration of the current literature of Zoölogy will be formed as soon as there are enough advanced students to undertake it.

22 Comparative Anatomy of Vertebrates. A brief course intended as an introduction to human anatomy.
Prerequisites, Courses 1 and 2.
Wiedersheim : Comparative Anatomy (English Translation).
Parker and Haswell : Zoölogy.
Parker : Zootomy.
Spring. T., Th. at 10:00. Laboratory work six hours a week.

NOTE. This course is given in 1900 for the benefit of Premedical students. It will not be offered in subsequent years, but the subject matter will be found in courses 9 and 10.

23 Preparatory Physiology. Recitations, lectures and demonstrations. Text. Winter. 9:00.

The Department of Domestic Science.

Introductory.

The unique functions of the home and its importance as a fundamental social institution render its effective organization and maintenance one of the greatest social tasks. Domestic Science has for its province the correlation of such knowledge bearing on this task as has been gained by the sciences of sociology, economics, physics, chemistry, biology and sanitation, and its applications in the household arts. It seeks to systematize the laws of healthful living. To this end it considers such problems as : the conditions necessary for a sanitary home, the selection and preparation of nutritious food and suitable clothing, economic domestic administration and the sanitation of groups of homes, *i. e.*, communities and states.

A New Vocation for Women.

Throughout the country there is a growing interest in the subject of healthful living, its conditions and the means of fulfilling them. Intelligent men and women are asking questions and seeking directions. Thoroughly trained students in this department are being vainly sought for as teachers in schools and colleges, as officers of administration in charitable institutions, as members of school boards and village improvement societies, as philanthropic workers, and as sanitary inspectors. The opportunity which the University now offers for thorough preparation for such positions is equalled by few, if any, institutions in this country.

Preparatory Work for Domestic Science Course.

Students who wish to take the Domestic Science course are advised to take the following studies in their preparatory course :

English,	9 courses ;
German,	6 courses ;
French,	6 courses ;
History,	3 courses ;
Mathematics,	6 courses ;
Physics,	2 courses ;
Chemistry,	3 courses ;
Botany,	2 courses ;
Physiology,	1 course ;
Physical Geography,	1 course ;
Total,	39 courses.

Preparatory Schedule.

Two schedules have been arranged for the preparatory work :

(1) A four-year schedule for those who find it necessary to take all the work in the Preparatory School, and who are not able to carry more than three studies during the first three years of the course.

(2) A three-year schedule for those who have satisfactorily passed in United States History, Physiology, and Arithmetic, before entering the Preparatory School, and who are able to carry four studies throughout the three years.

I. Schedule Arranged for Four Years.

FIRST YEAR.

HOUR.	FALL.	WINTER.	SPRING.
8:00	English 1	English 2	English 3
9:00	Arithmetic	Physiology	U. S. History
10:00	Phys. Geography 1	Botany 1	Botany 2
		SECOND YEAR.	
9:00	Ancient History	Modern History	Algebra 1
10:00	English 4	English 5	English 6
11:00	French 1	French 2	French 3
		THIRD YEAR.	
8:00	Algebra 2	Algebra 3	Plane Geom. 1
9:00	German 1	German 2	German 3
10:00	French 4	French 5	French 6
		FOURTH YEAR.	
8:00	German 4	German 5	German 6
9:00	Chemistry 1	Chemistry 2 and 3	Chemistry 4
10:00	English 7	English 8	English 9
11:00	Plane Geom. 2	Physics 1	Physics 2

II. Schedule Arranged for Three Years.

FIRST YEAR

HOUR.	FALL.	WINTER.	SPRING.
8:00	English 1	English 2	English 3
9:00	Ancient History	Modern History	Algebra 1
10:00	Physical Geog. 1	Botany 1	Botany 2
11:00	French 1	French 2	French 3

Second Year.

Hour.	Fall.	Winter.	Spring.
8:00	Algebra 2	Algebra 3	Plane Geom. 1
9:00	German 1	German 2	German 3
10:00	French 4	French 5	French 6
11:00	English 4	English 5	English 6

Third Year.

8:00	German 4	German 5	German 6
9:00	Chemistry 1	Chemistry 2 and 3	Chemistry 4
10:00	English 7	English 8	English 9
11:00	Plane Geom. 2	Physics 1	Physics 2

While real equivalents will be accepted for admission to college as substitutes for the above preparatory studies, the college course in Domestic Science outlined below is arranged for students who have had the preparatory studies mentioned above. College students in the Domestic Science course who have not presented for admission to college all the above preparatory studies will substitute for some of the studies in the Domestic Science course outlined below the above preparatory studies which they have not previously had.

Schedule of the Domestic Science Course Leading to the Degree of A. B.

First Year.

Hour.	Fall.	Winter.	Spring.
10:00	Zoölogy 1	Zoölogy 2	Zoölogy 3 and 4
11:00	Scientific German 16	Scientific German 17	History 5
1:30 T. & Th.	Chemistry 5	Chemistry 6	Chemistry 9
1:30 M. & W.	Physics 4	Physics 4	Physics 4
4:00	Phys. Training	Phys. Training	Phys. Training

Second Year.

10:00	Physiology 16	Physiology 17	Physiology 18
11:00	Rhetoric 1	Rhetoric 2	English Lit. 2
1:30	Phys. Chemistry 12	Phys. Chemistry 13	Phys. Chemistry 14
4:00	Phys. Training	Phys. Training	Phys. Training

Third Year.

9:00	Economics 1	Economics 2	Geology 4
10:00	Botany 3	Botany 4	Botany 5
11:00	Domestic Science 1	Domestic Sci. 2	Domestic Sci. 3
12:00			History 6
4:00	Phys. Training	Phys. Training	Phys. Training

FOURTH YEAR.

HOUR.	FALL.	WINTER.	SPRING.
8:00	Sociology 1	Sociology 2	Sociology 3
9:00		Domestic Sci. 6	
10:00	Domestic Sci. 4	Domestic Sci. 5	Domestic Sci. 10
1:30	Domestic Science 7	Domestic Sci. 8	Domestic Sci. 9

Courses.

1 General Hygiene. This is introductory to course 2, though complete in itself. Questions relating to the health of the individual are considered : the care of lungs, skin, eyes, digestion, the development of the body by indoor and outdoor exercise, the conservation of nervous and muscular force, and the conditions favorable for physical and intellectual work. Lectures and assigned readings. Fall, 11:00.

2 The Home. Its organization and conservation. A. The functions and development of the home. B. The house : site, architecture, construction, plumbing and sewage, heating, lighting, ventilation, furnishing and decorating, cleaning. Lectures, topical investigation and inspection of houses. Prerequisite, Domestic Science 1. Winter, 11:00.

3 Public Hygiene. Among the subjects discussed are : the care of streets and alleys, system of sewerage and garbage disposal, the inspection of food supplies, the prevention of epidemics, building and plumbing regulations, sanitary regulations. Lectures and research work. Prerequisite, Domestic Science 2. Spring, 11:00.

4 Food Materials. The sources of food supplies, composition and nutritive value of foods, adulterations. Yeo's Food in Health and Disease will be used as a guide, supplemented by lectures, the use of charts, models, etc. Fall, 10:00.

5 Selection of Foods. A continuation of Course 3. The cost of food materials, national foods, dietaries, the chemistry of the preparation of food. Prerequisite, Domestic Science 4. Winter, 10:00.

6 Household Economics. The organization of the household, domestic service, household expenditure, comparative study of family budgets, marketing. Winter, 1901, 9:00.

7 Principles of Housework. Lectures, demonstrations and practical work on the care of the house : bedmaking, sweeping, dusting, cleaning, the care of glass and silver, setting a table and serving a meal, the care of clothing, etc. Prerequisite, Domestic Science 2. Fall, 1900.

8 Principles of Cooking. This course is intended to illustrate the application of heat to foods and to show the value of the staple foods, as well as to cultivate accuracy, neatness and dexterity. Prerequisite, Domestic Science 2. Spring, 1900 ; Winter, 1901.

9 Advanced Cooking. A continuation of course 8. The preparation of more elaborate dishes and of entire meals. Prerequisite, Domestic Science 8. Spring.

10 Bacteriology. A general course of lectures having special reference to the bacteria found in water, foods and air, methods of water analysis, sterilizing. Spring.

Chemistry
Trig.
Trancte.

West Virginia University

MORGANTOWN, W. VA.

ANNOUNCEMENTS

FOR THE

SUMMER QUARTER

June 21 to September 1, 1900.

Morgantown, W. Va.
Published by the University.

STAFF OF INSTRUCTION.

Summer Quarter, 1900.

Members of the University Staff Who Will Teach During the Summer Quarter.

JEROME HALL RAYMOND, Ph. D., President of the University, and Professor of Economics and Sociology.

WAITMAN BARBE, A. M., Assistant to the President.

POWELL BENTON REYNOLDS, D. D., Professor of Philosophy.

ALEXANDER REID WHITEHILL, Ph. D., Professor of Chemistry.

JOHN LINDSAY JOHNSTON, C. E., Professor of Civil and Mining Engineering.

SAMUEL B. BROWN, A. M., Professor of Geology and Mineralogy.

ROBERT ALLEN ARMSTRONG, A. M., Professor of English Literature.

THOMAS CONDIT MILLER, A. M., Professor of Pedagogy, and Principal of the Preparatory School.

ROBERT WILLIAM DOUTHAT, Ph. D., Professor of the Latin Language and Literature.

LEE CLEVELAND CORBETT, M. S., Professor of Horticulture and Forestry, and Horticulturist of the Agricultural Experiment Station.

THOMAS EDWARD HODGES, A. M., Professor of Physics.

LEWIS CASS WOOLERY, A. M., Professor of the Greek Language and Literature.

ALFRED JARRETT HARE, A. B., Professor of the Latin Language and Literature.

CHARLES ALFRED ELLENBERGER, Director of the School of Music, and Professor of Music.

CHARLES HENRY PATTERSON, A. M., Professor of Rhetoric and Elocution.

LUCY CELESTE DANIELS, Ph. M., Associate Professor of European History.

RUSSELL LOVE MORRIS, C. E., Assistant Professor of Civil and Mining Engineering.

OTTO FOLIN, Ph. D., Assistant Professor of Physiological Chemistry.

JAMES DAVID THOMPSON, A. M., M. S., Assistant Professor of Mathematics.

EDWIN BINGHAM COPELAND, Ph. D., Assistant Professor of Botany.

HANNAH BELLE CLARK, Ph. D., Assistant Professor of Domestic Science, and Dean of Women.

JOHN BLACK JOHNSTON, Ph. D., Assistant Professor of Zoölogy.

ALFRED EDWARD THAYER, M. D., Assistant Professor of Materia Medica, Pathology, and Bacteriology.

DENNIS MARTIN WILLIS, LL. B., Instructor in Bookkeeping and Commercial Practice, and Principal of the Commercial School.

BENJAMIN GRAEFF PRINTZ, Director of Gymnasium and Instructor in Physical Training.

MARIE HESTER, Instructor in Vocal Music.

THEODORE CHRISTIAN RUDE, Instructor on Stringed Instruments.

JOHN ETHAN HILL, Ph. D., Instructor in Mathematics.

DANIEL WEBSTER OHERN, A. M., Assistant in Greek.

CHARLES FENTON HOLDEN, A. B., Fellow in English Literature.

ELEANOR BROWN MORELAND, A. B., Fellow in Domestic Science.

Special Lecturers for the Summer Quarter.

FRANK WILLIAM GUNSAULUS, D. D., President Armour Institute of Technology.

ANDREW SLOAN DRAPER, LL. D., President University of Illinois.

THOMAS CORWIN MENDENHALL, Sc. D., LL. D., President Worcester Polytechnic Institute.

JAMES WHITFORD BASHFORD, Ph. D., D. D., President Ohio Wesleyan University.

CHARLES FRANKLIN THWING, D. D., LL. D., President Western Reserve University.

WILLIAM Z. RIPLEY, Ph. D., Assistant Professor of Sociology, Massachusetts Institute of Technology, and Lecturer in Demography, Columbia University.

EDWARD WHEELER SCRIPTURE, Ph. D., Director Psychological Laboratory, Yale University.

THOMAS NIXON CARVER, Ph. D., Professor of Economics and Sociology, Oberlin College.

HARRY SANGER RICHARDS, Ph. B., LL. B., Professor of Law, State University of Iowa.

THOMAS PERRY JACOBS, A. M., Attorney at Law, New Martinsville, W. Va.

HENRY SHERWOOD GREEN, A. B., Professor of Greek and Latin, Bethany College.

CHARLES CHOLLET, A. M., Instructor in French, Columbia University.

JOSEPH WILLIAM CARR, Ph. D., Instructor in German, Harvard University.

ADA VIRGINIA HOUSTON, Piano.

ROBARTS HARPER, F. R. G. S., London, England, Travel-Lectures.

CLOYD NORTH McALLISTER, A. B., Assistant in Psychological Laboratory, Yale University.

PEARL MARTIN PEARSON, A. M., Cumnock School of Oratory, Northwestern University.

G. A. SCHRAM, Bufflalo. N. Y., Lecturer on Memory.

West Virginia University

ANNOUNCEMENTS FOR THE SUMMER QUARTER, 1900.

The summer quarter will begin Thursday, June 21, 1900, and continue ten weeks, closing on Saturday, September 1. The summer quarter is not a "summer school". It is an integral part of the University year. All departments of the University will be in full operation, and in addition to this regular work of the University, a number of attractive special courses will be offered by eminent specialists from other institutions. Both sexes are admitted to all departments on equal terms. A large number of popular lectures, concerts, and recitals will be given at the University during the summer quarter, all of them open without charge to students.

Library and Reading Room.

The Library and Reading Room occupy a part of the second floor of Martin Hall. Windows on three sides of the room furnish good light as well as afford a fine view of the picturesque Monongahela.

The room is open without break from 7:45 A. M. to 10 P. M. every day except Sunday, and on Sunday it is open for reading and the consultation of books from 2 P. M. to 5 P. M. No books are given out on Sunday. Students who come for the summer quarter are invited to spend as much time as possible in this department.

Students are allowed free access to the library shelves; and it is the effort of those in charge to render every service possible to aid students in making profitable use of the books.

The reading room is well supplied with the current periodicals and newspapers,—both technical and general—which are free of access to all who wish to make use of them.

Matriculation.

Students are requested to matriculate at the president's office, room 10, Science Hall, a day or two before the opening of the summer quarter, in order that classes may begin promptly on June 22. All students who take work at the University in the summer quarter, whether they have been in attendance previously or not, will register at the president's office when they enter the University for the summer quarter.

Admission and Credit.

Students are admitted in the summer on the same conditions as those on which they are admitted during any other quarter of the year. A catalogue giving the requirements for admission to all the courses leading to degrees will be mailed upon application. Teachers and others who desire to attend the University for the summer quarter without becoming candidates for degrees, will be admitted without examination to any classes they are prepared to enter. Work done in the summer quarter will count toward a degree under the same conditions as work done during any other quarter of the year. Students who enter the University for the summer quarter without being candidates for degrees will receive credit for the work they do, and if they afterward comply with the entrance requirements and become candidates for degrees, this work will count toward the degrees.

DEGREES.

Honorary Degrees.

No honorary degrees are conferred.

Bachelor of Arts.

The degree of Bachelor of Arts will be conferred upon any student who satisfies all entrance requirements and satisfactorily completes forty-two college courses, of which at least ten courses (including a thesis) are in some one department of study, selected by the student as his major subject or specialty. The professor in charge of the student's major work will act as the student's class officer and adviser, and will have authority to require the completion of the major subject and also such minor subjects in other departments as he may consider necessary or advisable collateral work ; but such minor requirements will not exceed six courses. With the exception of these major and minor courses, all work is elective and the student may, in consultation with his major professor, freely choose any subject taught in the University which his previous studies have prepared him to undertake ; but the recommendation of his major professor is necessary to graduation ; and no degree will be conferred upon any student who has not received credit for at least forty-two full college courses, and spent at least one University year (three quarters) in resident study at this University.

A student may elect Law as his major, but may not take more than ten courses (including a thesis) in Law to count toward the degree of B. A. A student who has received credit for nine (or, including a thesis, ten) courses in Law before receiving the degree of B. A. may finish the remainder of the Law course, and receive the degree of LL. B. by an additional year's work in Law, provided that in that time he is able to take all of the remaining courses required for the degree of LL. B.

Expenses.

University Fees.

Except in the School of Music, tuition is free to West Virginia students. To students from other states the tuition is:

In the Preparatory School, $5.00 per quarter.

In the Commercial School, $5.00 per quarter.

In the College of Law, $8.00 per quarter.

In the other colleges, $12.50 per quarter.

The matriculation fee is $5.00, payable upon entering the University by all students. Unless the student remains out of the University more than three years, the matriculation fee is paid but once.

The contingent fee is $2.00 per quarter, payable by all students except State Cadets.

Students taking laboratory courses pay the following fees, to cover the cost of material used: General Chemistry, Zoölogy, Botany, and Bacteriology, $2.00 per quarter; Anatomy, and Histology, $5.00 per quarter; Analytical Chemistry, $6.50 per quarter.

Board and Lodging.

It is possible to secure board and lodging in Morgantown for $3.00 per week. Most students, however, pay from $3.25 to $4.00 per week.

COURSES OF INSTRUCTION.

Summer Quarter, 1900.

For all baccalaureate degrees except the degree of Bachelor of Agriculture, at least forty-two full courses are required. A full course means a course of five class exercises a week, for one quarter, or their equivalent in laboratory or other practical work. In the following announcements each course will be understood to be a full course, the class meeting five times a week, Mondays to Fridays inclusive, thoughout the entire summer quarter, unless otherwise noted. The hour and class room are named at the end of the announcement of each course. The abbreviations are: U., University Hall; S., Science Hall; A., Agricultural Experiment Station; M., Martin Hall; C., Commencement Hall.

Philosophy.

PROFESSOR REYNOLDS.

1. Elements of Psychology. An introductory course devoted to the study of: (1) The intellectual processes, the feelings, and the processes of volition; (2) An outline of the structure and functions of the brain and nervous system as related to the states of consciousness and mental processes; (3) the principles and methods of mental training and the application of Psychology to education. Ladd's "Outlines of Descriptive Psychology," with lectures and notes by the instructor.

8.00; 23 S.

2 Comparative Psychology and Mental Development. An outline of physiological psychology; a study of the phases, conditions, and progress of mental phenomena and activities, from the lowest to the highest grades in both animals and man, with special application to mental training. Lectures, experiments, and references to Ladd, James, Calderwood, Baldwin, Romanes, and other authorities. Open to those who have taken Course 1, or its equivalent. 12:00; 23 S.

3 Elements of Logic and the Principles of Science. A review of the processes of conception, judgment, and reasoning; a discussion of the nature and laws of inference, induction, and the subsidiary processes, such as observation, experiment, classification, and hypothesis; causation and the inductive method; imperfect inductions and fallacies; the elements of deduction and formal logic; a discussion of propositions and syllogisms, and of fallacies and the means of detecting them. Fowler's "Deductive and Inductive Logic," with references to Mill, Jevons, Bain, and numerous original exercises. 10:00; 23 S.

Physiological Psychology.

PROFESSOR SCRIPTURE AND MR. MCALLISTER.

1 Physiological and Experimental Psychology. One hour daily through the quarter. A series of lectures and demonstrations. Text-books: Ladd's "Outlines of Physiological Psychology," Scripture's "New Psychology." Hour to be arranged.

2 **Psychology of Expression (Gesture, Speech, Music).** One hour daily until July 20. A series of lectures on the expression of thought and emotion as shown in facial expression, in gesture, in rhythmic movements, in prose and poetical speech and musical rhythm.

Hour to be arranged.

3 **Educational Psychology.** One hour daily from July 23 to September 1. Application of modern psychological principles to educational subjects; outlines of the psychology of touch, its use in education; motor abilities, accuracy of movement; fundamental principles of writing and drawing; sight, color-teaching; space, form-teaching, drawing, modeling; attention, concentration and distraction, laws for developing attention; memory, analysis into its components, experimental study of, calculation of results, development and training, time of study; imagination, use, necessity of development and repression, fables, children's books, toys; emotions, will, action, reflex, automatic, instinctive, voluntary, their training; education of the blind, the deaf and other defectives; child study, principles of anthropometry and psychometry; psychological development of the child, beginnings of instruction; economy in education, greatest results from least efforts, correlation and concentration of instruction; various educational subjects from a psychological standpoint,—amusement, play, toys, picture books, object-lessons, etc. The course is illustrated with experiments, lantern views, and a collection of educational material. Courses 2 and 3 will together count as one full course. Hour to be arranged.

4 **Laboratory Practice.** Two hours daily. A series of practical exercises in experimenting.

Pedagogy.

PROFESSOR MILLER.

1 **History of Education.** (a) Education in West Virginia, embracing a discussion of the General and the Irreducible School Fund, Independent District, the County as a Unit of Taxation, and the Central High School. (b) Education in the United States. Morgan and Cork's "History of Education in West Virginia;" Boone's "History of Education in the United States." 8:00; 10 M.

4 **School Organization and Management.** This course will include grading and classifying schools, courses of study, use of text-books, discipline, examinations, proper incentives, school ethics, and many other features of practical pedagogics. "State Manual" and Raub's "School Management," supplemented by lectures, papers and discussions. 10:00; 10 M.

5 **The Science of Education.** Educational theory; the basis of

school systems and methods; "What knowledge is of most worth?" Educational values; the practical, the disciplinary, the culture value. Recitations, discussions, lectures and essays. Payne's "Contributions to the Science of Education;" Hinsdale's "Studies in Education."

11:00; 10 M.

6 **Methods of Instruction.** The art and science of teaching; general methods, special methods; school-room practice; the recitation and the written exercise; elementary science teaching in secondary schools; the teaching of History, English and Mathematics. Discussions, readings, critiques. De Garmo's "Essentials of Method;" Putnam's "Manual of Pedagogics." 9:00; 10 M.

8 **School Buildings and Sanitation.** Location of buildings, school grounds, lighting, heating; ventilation, sewerage, furniture, apparatus and equipment. Illustrations of modern school architecture. Discussions and investigation with reference to the best conditions for district and city schools. A very important course for superintendents and school officers. The general literature of the subject found in the pedagogical library will be studied. 3:00; 10 M.

Sociology.

PRESIDENT RAYMOND.

1 **Anthropology.** An elementary course on man as the unit o society, and on the evolution of society and social institutions. The general purpose of the course is to point out how man has developed into his present social state, what the influences were which caused this development, and how these influences themselves have evolved. The general subjects discussed are : first, the antiquity of man, and the place man occupies in nature ; second, the origin and early development of institutions which have made man what he is, and upon which contemporary society is based, such as language and writing, the arts of life and of pleasure, religion and science, mythology and history, the family and social structure. Tylor's "Anthropology," supplemented by lectures and assigned readings. 8:00 ; 10 S.

ASSISTANT PROFESSOR CLARK.

6 **Contemporary Charities.** The causes and conditions of poverty, methods of relief, historical and contemporary; special classes, children, the aged, unemployed, defective ; charity organizations. Warner's "American Charities" will be used as a guide, with lectures and topical readings. 9:00.

Economics.

PRESIDENT RAYMOND.

1 **Principles of Economics.** An exposition of the fundamental laws of Political Economy. This is an elementary course, prerequisite to all advanced work in Economics. Ely's "Outlines of Economics," supplemented by lectures and assigned readings in the library. 9:00; 10 S.

PROFESSOR CARVER.

7 **The Distribution of Wealth.** A study of the modern distributive process and of the factors which determine the shares in distribution. The course naturally begins with a study of theories of value, followed by a study of theories of rent, interest, wages, profits, etc. In the constructive part of the course, the purpose will be to show how the law of variation observed in the phenomena of value may be traced in the processes which determine the shares in the products of industry. Lectures and assigned reading to be reported on in class. 10:00.

8 **Methods of Social Reform.** A study of the fundamental characteristics of industrial society and an examination of the proposed plans of social regeneration; 1. Those which propose the reconstruction of society on a fundamentally different basis from the present; 2. Those which are merely palliative in their aims and tendencies; 3. Those which propose the progressive improvement and perfection of society without destroying its present foundations. Lectures and library work. 11:00.

9 **Economic Legislation.** In this course each student is expected to study one concrete problem thoroughly, and to present to the class a bill drawn up as if for legislative enactment. Upon presentation, each bill is to be criticised and the framer is to defend it against all comers. After thorough criticism and discussion a vote of the class is taken. Among the subjects so treated will be Trusts, Railway Pooling, Banking, the Standard of Value, Employer's Liability, Factory Inspection, Tramps, Strikes, etc. 12:00.

Domestic Science.

ASSISTANT PROFESSOR CLARK AND MISS MORELAND.

2 **Home Sanitation.** The site, architecture and construction of the house; plumbing and sewerage, heating, lighting and ventilation, furnishing and decoration, cleaning. Lectures, library work and inspection of houses. 11:00.

4 **Food Materials.** The source of food supplies, composition and nutritive value of foods; adulterations. Lectures with the use of charts and models; experiments. Half course, M. and W., 2:00.

7 **Principles of Cooking.** This course is intended to illustrate the application of heat to foods and to show the value of the staple foods. Course 4 must accompany this. Half course, Tu. and Th., 2:00.

History.

ASSOCIATE PROFESSOR DANIELS.

7 **History of Greece.** This course will trace the history of Greece from the beginning of the Persian wars to the Roman Conquest. The mythology of the Greeks, the contributions of earlier nations to Greek civilization, and the constitutional development of the pre-Persian period will be treated in preliminary lectures, and an effort will be made to give the student by means of lectures and collateral reading some acquaintance with the literature, philosophy and art of the Greeks. 11:00; 4 M.

16 **The History of Europe from the Reformation to the French Revolution.** This course will be preceded by a brief consideration of the Renaissance and the Reformation, after which the history of Europe will be traced through the important political, territorial and social changes of the 16th, 17th and 18th centuries. 10:00; 4 M.

19 **History of the United States.** An outline of the political and constitutional history of the United States since 1789. This course is designed particularly for teachers of history in the common and secondary schools, but is open to all students. 9:00; 4 M.

Law.

PROFESSOR RICHARDS.

1 **Contracts.** Full course. Two hours daily first five weeks. 8:00 A. M.; 3:00 P. M.

2 **Partnership.** Half course. One hour daily first five weeks. 9:00 A. M.

JUDGE JACOBS.

3 **Equity.** Full course. Two hours daily second five weeks. 8:00 A. M.; 3:00 P. M.

4 **Damages.** Half course. One hour daily second five weeks. 9:00 A. M.

Greek Language and Literature.

MR. OHERN.

1 **First Greek Book.** (Chapters I-XL). This course is for beginners. Emphasis is laid on correct pronunciation, written accent, memorizing, vocabularies, declensions and conjugations, and translating easy sentences from Greek into English and from English into Greek to illustrate the principles of grammar as given in this elementary book. White's "First Greek Book." 8:00; 6 M.

2 **First Greek Book** (completed). This is a continuation of Course 1, and the work is similar in character. 9:00; 6 M.

4 **Xenophon's Cyropaedia.** (Books VII and VIII.) This is an independent course given especially for Summer Quarter students. "Xenophon's Cyropædia," by Alfred Goodwin. Prerequisites, Greek 1, 2, and 3. 11:00; 6 M.

PROFESSOR WOOLERY AND PROFESSOR GREEN.

10 Homer's Iliad or **Odyssey** (Books I, II and III) and **Homeric Verse.** (If the independent Preparatory Course 4, offered in the Summer Quarter, has been taken, this course will be credited as College Greek.) All the text is read metrically, some passages are memorized and others are assigned for translation in English verse. Etymology and Mythology receive special attention. Seymour's "Iliad." Collateral reading: Jebb's "Introduction to Homer," and Gladstone's "Time and Place of Homer." 8:00; 8 M.

15 Lucian's Dialogues. Those who have had two years or more of Greek are eligible to membership in this course. "Selections from Lucian," by Williams. 9:00; 8 M.

18 New Testament Greek. Luke's Gospel and James and First and Second Timothy. In the translation, pure, idiomatic English of the nineteenth century is required. Westcott and Hort. 10:00; 8 M.

Latin Language and Literature.

PROFESSOR HARE.

1 Beginning Latin. (Chase and Stuart's "First Year in Latin," pages 9–125.) This is a course for beginners, but no student will be admitted to the class until he has credit for English Grammar. 11:00; 11 M.

2 Latin Syntax. (Chase and Stuart's "First Year in Latin," pages 126–180.) This course is for students who have had a thorough drill in the declensions and the conjugations. 8:00; 11 M.

3 The Subjunctive, Oratio Obliqua, and **Caesar.** (Book I, chapters 1–29.) Chase and Stuart's "First Year in Latin," completed. 2:00; 11 M.

4 Eutropius. (Books I–V.) This course is for those who have completed Courses 1, 2, and 3, or their equivalent. 10:00; 11 M.

8 Cornelius Nepos. For students who have had five courses in Latin. 9:00; 11 M.

Allen and Greenough's Revised Latin Grammar is used for reference in Courses 4 and 8.

PROFESSOR DOUTHAT.

10 Virgil's Eclogues and Georgics. Collection of working vocabulary. Translations oral and written. Roman life illustrated by lantern views and lectures. Chase and Stuart's "Virgil's Eclogues and Georgics." 11:00; 21 U.

14 Livy. (Book XXI.) Translation, both oral and written, from Latin to English, and from English to Latin. Sight reading and translation at sight. Chase and Stuart's "Livy," Peck and Arrowsmith's "Roman Life in Prose and Verse," and Miller's "New Latin Composition." Roman life by lantern views and lectures. 9:00; 21 U.

18 Early Latin. Translation, both oral and written, from Latin to English, and from English to Latin. Special subjects assigned for both

kinds of translation. Text-books: Allen's "Remnants," Merry's "Fragments." Books of reference: Egbert's "Latin Inscriptions," Johnston's "Latin Manuscripts." Roman life by lantern views and lectures.

8:00; 21 U.

22 Tacitus: Germania and Agricola. Translation, both oral and written, from Latin to English, and from English to Latin. Special subjects assigned for both kinds of translation. Text-books: Allen's "Germania and Agricola," Clement's "Latin Selections." Books of reference: Harper's "Classical Dictionary," Cape's "Early Empire." Roman life by lantern views and lectures. 10:00; 21 U.

French Language and Literature.

PROFESSOR CHOLLET.

1 Elementary Course. Grammar, reading, and as much practice as possible in pronunciation and conversation. Whitney's or Edgren's "Grammar." 11:00; 10 U.

2 Elementary Course. A continuation of Course 1. The Grammar and Reader will be finished, and the reading of easy French texts continued. 9:00; 10 U.

16 French Conversation, for students who have had one year or more of French. Hours to be arranged; 10 U.

17 French Reading, for students who have had one year or more of French. Selections from modern and classical authors. Students who take this course may continue with Course 4 or a higher course.

10:00; 10 U.

German.

DR. CARR.

1 Elementary German. A course for beginners, the object being to acquaint the student with the elements of Grammar, to give him a reading knowledge of the easiest German prose, and as much practice in pronunciation as possible. Thomas' Grammar, Part I. Harris' Reader, Part I. Hour to be arranged. 22 U.

17 Intermediate German. A course in reading and composition. For students who have had either two or three terms (six or nine months) of German. Hour to be arranged. 22 U.

18 Advanced German. A course in German Literature for students who have had about two years of German. Hour to be arranged. 22 U.

19 German Conversation. A course for students who have had one year or more of German, and who desire to learn to speak the language. Hour to be arranged. 22 U.

English Language and Literature.

MR. HOLDEN.

2 General Survey of English Literature. This course is intended to be an introduction to the study of literature. Its purpose is to give the

student a conception of the nature of literature, a general knowledge of the great field of literature, and a definite knowledge of a few English classics. Recitations and critiques on assigned readings. Prerequisites, Rhetoric 1 and 2. 11:00; 13 U.

PROFESSOR ARMSTRONG.

4 **American Literature.** A brief outline of its historical development, and a study of selected works of representative authors. Recitations, lectures, and critiques on assigned readings. Prerequisites, Rhetoric 1 and 2, and English Literature 2. 8:00; 13 U.

7 **The Bible as Literature.** A study of the English Bible as literature; discussion of the literary form and interpretation of some of its masterpieces. Recitations, lectures, class readings. Prerequisites, Rhetoric 1 and 2, and English Literature 2. 9:00; 13 U.

9 **Representative Plays of Shakespeare.** The interpretation of representative plays. Recitations, class readings, and reports on collateral readings. Boas' "Shakespeare and His Predecessors," and annotated editions of the plays read in class. Prerequisites, Rhetoric 1 and 2, and English Literature 2. 10:00; 13 U.

17 **Browning.** The life and works of Browning; his method, ideals, teachings, and influence. The most important of his shorter poems, and one of his longer poems, will be studied and interpreted. One-third course. Monday, 4:00; 13 U.

MR. BARBE.

18 **Contemporary American Writers.** An attempt will be made to interpret the spirit and to note the tendency of the best American literature of today. Such writers as Whitman, Lanier, Aldrich, Stedman, Howells, James, Crawford, Cable, Field, Page, Riley, Stockton, Emma Lazarus, Maurice Thompson, George E. Woodberry, Stoddard, Gilder, Harte, and others will be glanced at and some of them will be studied closely. Lectures, prescribed reading, and written work. Students will be encouraged to form and express opinions of their own about what they read. This course is open to those who have had Course 2 or its equivalent. 11:00.

Rhetoric.

PROFESSOR PATTERSON.

1 **Composition.** The work is almost wholly practical. Daily themes. Critiques in class. A number of book reviews and three long essays. In addition to the text-book work, special study of several prose masterpieces. It is intended that the student shall obtain a thorough practical knowledge of all matters of rule. Lectures. 11:00; 10 M.

7. **Grammar of Modern English.** An advanced course in the grammar of the English language. Of especial value to teachers of English. 10:00; 10 M.

12 Dramatic Elements. A study of structure in the beginnings of English Drama, and especially of the development of style in the prose drama from Shakespeare to Shirley. (A course preparatory to later courses in dramatic composition.) Prerequisites, Rhetoric 1 and 2, and English Literature 2. 9:00; 10 M.

Elocution.

PROFESSOR PATTERSON.

1 Elocution. A preliminary course in the essentials of expression to remove faults and mannerisms and to establish correct use, freedom, and ease; to give the student control of the instruments of expression. Section drill, rehearsals, and recitals. 12:00; 10 M.

8 Oration and Argumentation. Study of great orations. Lectures on extemporaneous speaking, structure and diction of spoken discourse, etc. Constant practice in extemporaneous speaking and debate. Preparation of briefs and of one oration. Prerequisite, Elocution 1. Hour to be arranged; 10 M.

6 Pulpit Oratory. Homiletic analysis. Structure and delivery of the sermon. Reading of hymns, psalms, and selections from the Scriptures. Prerequisites, Elocution 1 and 2; Rhetoric 1; English Literature 2. Also recommended, English Literature 7. 8:00; 10 M.

Mathematics.

Arithmetic.

MR. WILLIS.

1 Arithmetic. A review course for teachers. Wentworth's "Advanced Arithmetic." 10:00; 24 U.

Algebra.

DR. HILL.

1 Algebra, up to and including Simple Equations. Charles Smith's "Elementary Algebra." 11:00; 14 U.

2 Algebra, up to and including Quadratics. Charles Smith's "Elementary Algebra." 10:00; 14 U.

3 Algebra, including Progressions and Logarithms. Charles Smith's "Elementary Algebra." 9:00; 14 U.

Geometry.

DR. HILL.

1 Plane Geometry. The first two books. Wentworth's "Plane Geometry." 8:00; 14 U.

ASSISTANT PROFESSOR THOMPSON

3 Solid Geometry. Wentworth's "Solid Geometry." 10:00; 3 M.

Trigonometry.

ASSISTANT PROFESSOR THOMPSON.

1 **Plane Trigonometry.** Wells' "Revised Trigonometry." 9:00; 3 M.

Analytic Geometry.

ASSISTANT PROFESSOR THOMPSON.

1 **Analytic Geometry.** Through conic sections. Bailey and Wood's "Analytic Geometry." 8:00; 3 M.

Calculus.

ASSISTANT PROFESSOR THOMPSON.

1 **Elementary Calculus.** The Elements of Differential and Integral Calculus. Taylor's "Revised Calculus." 11:00; 3 M.

Physics.

PROFESSOR HODGES.

1 **Elementary Physics.** Mechanics and Heat. Recitations, supplemented by experiments and laboratory exercises. One hour per week at least will be devoted to individual laboratory work. Wentworth and Hill's "Text Book of Physics." Prerequisite, Plane Geometry. 11:00; 11 S.

Laboratory hour to be arranged. 1 S.

4 **Experimental Physics.** A laboratory course exclusively, consisting of elementary quantitative experiments. Open to students who do not take Course 6. Sabine's "Laboratory Course in Physics." Prerequisites, Physics 1 and 2, and Plane Trigonometry. 2:00; 1 S.

6 **General Physics.** Mechanics. Lectures and recitations, accompanied by individual laboratory work, which, though elementary, is strictly quantitative. Ames' "Theory of Physics." Prerequisite, Plane Trigonometry. 9:00; 11 S.

Laboratory hour to be arranged. 1 S.

20 **Special Work.** Students desiring to pursue any line of special work in the Department of Physics will be given opportunity to do so to the extent that the time of the instructor and the laboratory equipment will permit. Credit for such work will be allowed in proportion to the work done.

Chemistry.

PROFESSOR WHITEHILL AND ASSISTANT PROFESSOR FOLIN.

1 **Inorganic Chemistry.** This course is designed for beginners, and serves as a general introduction to chemical methods and operations. It includes a systematic study of the laws of chemical combinations, the

source, preparation, properties and compounds of the non-metallic elements and the principles and theories of chemical philosophy. Experimental lectures, laboratory work, and recitations. 10:00; 20 S.

2 **Inorganic Chemistry.** This course includes the study of the metallic elements, and special attention is paid to the application of Chemistry in Agriculture, Engineering, Medicine, and every-day life. Lectures, laboratory work, and recitations. 9:00; 20 S.

4 **Qualitative Analysis.** A laboratory course designed for students who are familiar with the elementary principles of Chemistry. It includes the preparation of the more important gases and salts, and the detection of the elements and their compounds. Half course.

2:00; 22 S.

5 **Elementary Quantitative Analysis.** This course includes a small number of simple gravimetric, volumetric and electrolytic determinations, together with the study of the operations involved. Laboratory course. Half course. 2:00; 22 S.

7 **Analysis of Coal, Coke and Water.** This course is designed especially for Engineering students, but is open to others who have the necessary preliminary training. Laboratory course. Half course.

Tuesdays, Thursdays, 2:00; 21, 22 S.

8 **Toxicology.** Especially designed for medical students. The course will include a study of inorganic and organic poisons, their physiological effects and antidotes. Laboratory course. Half course.

Tuesdays, Thursdays, 2:00; 21, 22 S.

9 **Water and Food Analysis.** Analytical Chemistry as applied to domestic science. This course is in part identical with Course 8, but includes analysis of water and of foods.

Tuesdays, Thursdays, 2:00; 21, 22 S.

10 **Quantitative Analysis.** This course is designed for students who expect to make Chemistry a specialty. It includes exercises in determining the composition of ores, minerals, and various technical compounds. Instruction is also given in assaying, gas analysis, and in the analysis of iron and steel. Exercises are selected to give as wide an acquaintance as possible with laboratory methods. Half course.

Mondays, Wednesdays, 2:00; 21, 22 S.

11 **Iron Ores, Pig Iron and Steel.** This course includes practice in the special methods of analysis of ores, pig iron and steel in use in the laboratories of the iron and steel works located in West Virginia and Western Pennsylvania. Half course. Tuesdays, Thursdays, 2:00; 21 S.

20 **Research Work.** Chemistry offers a wide field for investigation. Special work in any of the various departments of the science may be taken in the laboratory under the direction of the instructors, and credit will be given in proportion to the amount of work accomplished.

21, 22 S.

Geology.

PROFESSOR BROWN.

3 Geographic Geology. The crust of the earth; river valleys; plateaus and mountains; man and nature; the economic products of the earth; meteorological instruments and methods. Open to any University student. Davis' "Physical Geography." 10:00; 30 S.

4 General Geology. A general course in dynamic and structural Geology. Economic applications of Geology will receive special attention. Numerous excursions will be made. The University is situated in a mining region, and within five miles of the western fold of the Appalachian mountains; the advantages of the practical study of Geology are therefore almost unequaled. Recitations, lectures and field work. LeConte's "Elements of Geology." Prerequisites, Chemistry 1, Physics 2. 8:00; 30 S.

5 Paleontology. The progress and development of plants and animals through the different ages of the earth. For illustration in this subject the University has an equipment of many thousands of fossils, casts and models. Recitations and lectures. Le Conte's "Elements of Geology." Prerequisites, one course in Botany and one in Zoölogy. 11:00; 30 S.

Zoölogy.

ASSISTANT PROFESSOR J. B. JOHNSTON.

Under the description of each course are given the names of several books for reference which are found in the library and will be of especial value in connection with the given course.

1 Elementary Zoölogy. A study of types (Amoeba, Paramoecium, Sponge, Hydra, Earth worm) of the lower classes of animals with reference to structure, functions, and relationships, and of the cell and cell division. Laboratory work supplemented by lectures on the physiology of the cell.

Prerequisites: Two courses in Preparatory English Composition and Rhetoric, or satisfactory evidence of ability to write clear, forcible English.

Parker: Elementary Biology.
Wilson: The Cell in Development and Inheritance.
Hertwig: The Cell.
Hertwig: Zoölogy, Field's Translation.
Wilson: Chapters on Evolution.
Sedgwick and Wilson: Elementary Biology.

Lectures twice a week at 8. Laboratory work eight hours a week, forenoons. 2 U.

2 Introduction to Vertebrate Zoölogy. The structure and development of the frog, and the classification of vertebrates.

Ecker's Frog, (preferably Gaup's edition).

Marshall : Embryology.

Macalaster : Zoölogy.

Parker and Haswell : Zoölogy, Vol. II.

Lectures twice a week at 8. Laboratory work eight hours a week, forenoons. 2 U.

3 The Evolution of Species. A presentation of the evidences of evolution, with an account of the current theories. Illustrated lectures and reading. Open to all students. Half course. Two lectures a week at an evening hour. 2 U.

4 Field Work. Field excursions and laboratory work with reading and occasional lectures on the principles of classification and the distribution of animals. The work will consist in the collection, identification and preservation of specimens of the local fauna, and recording observations on the habits, and time and place of occurrence of animals in the vicinity of Morgantown. The aim will be to interest the student in the general problems of Zoölogy and in the materials and methods for their solution. Hours and credit to be arranged. 2 U.

Physiology.

ASSISTANT PROFESSOR J. B. JOHNSTON.

1 Elementary Physiology. A training course for teachers. Intended for those expecting to teach Physiology in preparatory or public schools. Each member of the class will prepare and demonstrate experiments illustrative of various topics. The demonstrations will be subject to the criticisms of the class and instructor. 2 U.

Botany.

ASSISTANT PROFESSOR COPELAND.

2 Elementary Field Botany. Chiefly out-door work, and includes practice in the determination of vascular plants. No prerequisites.

13 Teachers' Course. A one-term resumé, covering the ground to which at least two terms should be devoted in the preparatory schools. Two lectures a week on general Botany, with laboratory and field work. No previous Botany required.

16 Local Ecology. A study of the relationship of native plants to their environment. Prerequisite, ability to determine flowering plants.

17 Cryptogamic Botany. Lectures and laboratory and field work on the chief groups of flowerless plants. Will not count as part of required work of students whose major study is Botany. Prerequisite, Botany 2, or its equivalent.

20. Research. Students prepared to do original work in physiology or histology will be given such opportunities as the equipments of the laboratories permit, and credit will be given in proportion to the amount of work accomplished.

All the work in Botany will be at hours to be arranged during the afternoon.

Pathology, Bacteriology, and Materia Medica.

ASSISTANT PROFESSOR THAYER.

Hygiene.

1 **Hygiene.** Lectures on house and school sanitation, disinfecting methods, and similar related subjects. This course will be of special value to teachers. 10:00; 1 U.

2 **Public Health and Vital Statistics.** A course of Synoptic Lectures, one each week, open to all. One-third course. Place and hour to be announced.

Bacteriology.

1 **General Bacteriology.** This course includes the study of moulds, fungi and bacteria, both by lectures and by laboratory methods, with special reference to disease and its prevention; it will thus illustrate and supplement the course in Hygiene. The methods of preparing the different culture media, propagating colonies, staining and mounting micro-organisms, and recognizing varieties, will be taught, and each student will have an opportunity to practice them. 11:00; 1 U.

Histology.

1 **Histology.** Practical laboratory instruction in the composition of the normal tissues, and in the technique of their study microscopically will be given daily for two hours. The student will be required to make a series of at least 100 slides and prove his understanding of them by drawings and descriptions in his note book. The slides then become his personal property. 1:30 to 3:30; 1 U.

Horticulture.

PROFESSOR CORBETT.

While none of the regular courses outlined in the catalogue will be offered during the Summer Quarter, the instructor will be present and will hold himself ready to offer advice to special or advanced students who may wish to pursue some line of investigation not offered in regular courses, or to any who may wish to make a more detailed study of branches offered in regular course, provided they have taken such regular course or an equivalent.

Civil and Mining Engineering.

PROFESSOR J. L. JOHNSTON.

1 **Mechanical Drawing and Design.** Prerequisite, Descriptive Geometry. 14 S.

2 **Masonry.** Dams, foundations, arches, piers, and abutments. Prerequisite, Mechanics, complete. Recitations and lectures. Baker. 14 S.

3 **Bridge Design.** The plate girder and Pratt truss. Prerequisite, four years' course in Mathematics. Merriman, Part III. 14 S.

4 **Railroad Surveying.** Theory and practice of railroad surveying. Prerequisite, Calculus. Field Practice. Searles. 14 S.

5 **Sanitary Engineering.** Sewers and drains, house drains, sewage disposal. Prerequisite, Theoretical Mechanics. Lectures and recitations.

ASSISTANT PROFESSOR MORRIS.

6 **Projections.** Orthographic projections in one quadrant. Elementary problems in shades and shadows. Isometric and oblique projections. Recitations. Warren's text-books. 14 S.

7 **Descriptive Geometry.** Orthographic projections. Problems of the point, line and plane tangencies and developments. Prerequisite, Geometry, complete. Recitations. Warren. 14 S.

8 **Land Surveying.** Theory and practice of land surveying. Magnetic variations. Calculating the content. Retracing old lines. Division of lands. Establishment of true meridians. Care and use of instruments. Field practice. Prerequisite, Trigonometry. Lectures and recitations. Gillespie's "Surveying." 14 S.

9 **Topographical Surveying.** Topographic, hydrographic and barometric surveying. Prerequisite, Trigonometry. Lectures and recitations. Gillespie's "Higher Surveying." Half course. First five weeks. 14 S.

10 **Mine Surveying.** Underground surveying. Prerequisite, Trigonometry. Lectures and recitations. Gillespie's "Higher Surveying." Half course. Second five weeks. 14 S.

Music.

The School of Music will be in session during the Summer Quarter. The following teachers will give instruction :

PROFESSOR ELLENBERGER, Director, Harmony and Pipe Organ ;

MR. RUDE..... Violin, Mandolin, Guitar, and Banjo ;

MRS. HESTER..... Voice ;

MISS HOUSTON..... Piano.

Commercial School.

The courses offered during the Summer Quarter comprise such subjects as are usually given in the ordinary "business course," viz: Bookkeeping, Arithmetic. Penmanship, Shorthand, and Typewriting. The object of this course is to qualify students for office work.

Students who have work in any of the other departments of the University are permitted to come into this department and take all or part of this work without additional fees.

MR. WILLIS.

1	**Bookkeeping.**	Swartz's "Office Routine and Bookkeeping."	8:00 ; 24 U.
2	**Shorthand.**	Dement's "Pitmanic System."	9:00 ; 24 U.
3	**Arithmetic.**	Wentworth's Advanced.	10:00 ; 24 U.
4	**Penmanship.**		11:00 ; 24 U.
5	**Typewriting.**		8:00 to 12:00 ; 23 U.

The Gymnasium.

BENJAMIN GRAEFF PRINTZ, Director, and Instructor in Physical Culture.

The Gymnasium occupies the first story of Commencement Hall. It is well equipped with apparatus, lockers, shower-baths, swimming pool, and other accessories. The Director of the Gymnasium will be on duty during the summer quarter, and will conduct regular classes in club swinging and apparatus work, and will also direct the individual work of students in general body building.

During the summer quarter the Gymnasium will be open every forenoon from eight until twelve o'clock, and every afternoon (except Saturdays) from half past one until six o'clock.

All students are invited to take advantage of the opportunities for physical culture afforded by the Gymnasium.

PUBLIC LECTURES AND ENTERTAINMENTS.

During the Summer Quarter there will be a series of attractive public lectures and entertainments, all of which will be free to students. The lecturers will be:

MR. ROBARTS HARPER, London, England.

A series of twelve splendidly illustrated travel lectures, with special reference to the manners and customs of the people, the scenery, and the architecture and the art of the countries described. Each lecture is illustrated by photographed and hand painted views, and in most of them motion pictures are introduced without pause as part of the continuous illustration of the subject. The illustrations are exhibited by means of three oxy-hydrogen projection lanterns of unrivalled power and excellence, and an electric cinematograph or motion picture apparatus, operated by an expert. The dates and subjects are as follows:

Thursday, June 21, 8 P. M., "Masterpieces of Architecture;"
Saturday, June 23, 8 P. M., "From Hudson to Thames;"
Tuesday, June 26, 8 P. M., "A Holiday Trip to Europe" (England and Scotland);
Thursday, June 28, 8 P. M., "Ireland;"
Saturday, June 30, 8 P. M., "The Rhine;"
Tuesday, July 3, 8 P. M., "Switzerland;"
Thursday, July 5, 8 P. M., "Under Italian Skies;"
Saturday, July 7, 8 P. M., "Monte Carlo;"
Tuesday, July 10, 8 P. M., "Under the French Flag;"
Thursday, July 12, 8 P. M., "Paris;"
Saturday, July 14, 8 P. M., "Cuba and the War;"
Monday, July 16, 8 P. M., "Around the World in a Man o' War."

MR. P. M. PEARSON, Cumnock School of Oratory, Northwestern University, Evanston, Illinois.

A series of six lecture-recitals,—popular studies in modern literature combining anecdote, biography, and criticism with readings from the authors' representative writings.

Monday, June 25, 8 P. M., "James Whitcomb Riley;"
Tuesday, June 26, 4 P. M., "Rudyard Kipling;"
Wednesday, June 27, 8 P. M., "Paul Dunbar;"
Thursday, June 28, 4 P. M., "Charles Dickens;"
Friday, June 29, 8 P. M., "Alfred Tennyson;"
Saturday, June 30, 4 P. M., "King and Field."

PRESIDENT A. S. DRAPER, University of Illinois, Champaign, Illinois. A series of nine lectures:

Monday, July 2, 4 P. M., "What is Education?"
Monday, July 2, 8 P. M., "The Difference between the Pilgrims and Puritans;"

Tuesday, July 3, 4 P. M., "The Evolution of the American School System;"
Wednesday, July 4, 4 P. M., "The Spirit of the Teacher;"
Wednesday, July 4, 8 P. M., "Abraham Lincoln: His Life in Illinois and the Presidency;"
Thursday, July 5, 4 P. M., "Relations of Management and Instruction in the Schools;"
Friday, July 6, 4 P. M., "Growth of American Universities;"
Friday, July 6, 8 P. M., General Grant: from Galena to Riverside;"
Saturday, July 7, 4 P. M., "The Rise and Settlement of the Alabama Claims." (President Draper was a member of the Court which determined the claims made against the Geneva Award).

PROFESSOR PATTERSON.

A series of three public readings:
Monday, July 9, 8 P. M., Thomas B. Aldrich;
Saturday, July 21, 8 P. M., Dickens;
Monday, August 20, 8 P. M., Elocutionary Recital.

PROFESSOR WM. Z. RIPLEY, Massachusetts Institute of Technology, Boston, Mass.

1. A series of six lectures on Ethnology:
Wednesday, July 18, 8 P. M., "Racial Origins of the English People;"
Thursday, July 19, 8 P. M., "Social Selection as a Factor in Evolution;"
Friday, July 20, 8 P. M., "The Ethnic Basis of the Eastern Question;"
Monday, July 23, 8 P. M., "European Elements in our American Population;"
Tuesday, July 24, 8 P. M., "Racial Aspects of the Philippine Problem;"
Wednesday, July 25, 8 P. M., "Physical Environment as a Factor in the Development of Culture."

2. A series of six lectures on economic subjects:
Wednesday, July 18, 4 P. M., "The Railroad Problem in New England;"
Thursday, July 19, 4 P. M., "The Gas Problem in Massachusetts;"
Friday, July 20, 4 P. M., "Regulation of Street Railways by Law;"
Monday, July 23, 4 P. M., "The Administrative Work of the State of Massachusetts;"
Tuesday, July 24, 4 P. M., "Factory Legislation in Massachusetts;"
Wednesday, July 25, 4 P. M., "Municipal Problems in the Eastern States."

PRESIDENT J. W. BASHFORD, Ohio Wesleyan University, Delaware, Ohio.

1. Two popular lectures:
Friday, July 27, 8 P. M., "Oratory and Orators;"
Saturday, July 28, 8 P. M., "The Outlook."

2. A series of six lectures on the Science of Religion :

Monday, July 30, 8 P. M., "The Phenomena ;"

Tuesday, July 31, 8 P. M., "The Phenomena Capable of Scientific Treatment ;"

Wednesday, August 1, 8 P. M., "The Hypotheses—Materialism, Pantheism ;"

Thursday, August 2, 8 P. M., "The Hypotheses—Theism ;"

Friday, August 3, 8 P. M., "Revelation ;"

Saturday, August 4, 8 P. M., "Application of the Scientific Test of Experiment."

PRESIDENT T. C. MENDENHALL, Worcester Polytechnic Institute, Worcester, Mass.

A series of eight lectures :

Monday, August 6, 8 P. M., "Weighing the Earth ;"

Tuesday, August 7, 4 P. M., "The Evolution of Power ;"

Tuesday, August 7, 8 P. M., "Earthquakes ;"

Wednesday, August 8, 4 P. M., "The United States Coast and Geodetic Survey ;"

Wednesday, August 8, 8 P. M., "The Doctrine of Chance ;"

Thursday, August 9, 4 P. M., "Student Life in Japan ;"

Thursday, August 9, 8 P. M., "The Alaska Boundary ;"

Friday, August 10, 8 P. M., "The Behring Sea Controversy."

PRESIDENT F. W. GUNSAULUS, Armour Institute of Technology, Chicago, Ill.

A series of four lectures on "The Higher Ministries of Contemporary English Poetry."

Monday, August 13, 8 P. M., Introduction.

Tuesday, August 14, 8 P. M., Matthew Arnold.

Wednesday, August 15, 8 P. M., Alfred Tennyson.

Thursday, August 16, 8 P. M., Robert Browning.

PROFESSOR G. A. SCHRAM, Buffalo, N. Y.

A series of three lectures on "Memory."

Tuesday, August 21, 8 P. M., Self Study, the Basis of Natural Attent on and Memory ;

Wednesday, August 22, 8 P. M., How and Why we Recollect ;

Thursday, August 23, 8 P. M., Thought Memory and Verbal Memory,—Secrets of Teaching Conversational and Oratorical Power.

PRESIDENT CHARLES F. THWING, Western Reserve University, Cleveland, Ohio.

A series of four lectures on "The American University."

Tuesday, August 28, 8 P. M., Its Organization and Administration ;

Wednesday, August 29, 8 P. M., Its Chief Executive ;

Thursday, August 30, 8 P. M.,—Its Teaching of the Duty of Patriotic Service;

Friday, August 31, 8 P. M.,—Its Place in American Education and in Life.

Informal Receptions.

In order to give the students an opportunity to meet socially the distinguished lecturers who will be at the University during the Summer Quarter, a series of informal receptions will be held at the President's house, to which all students, members of the faculty, and friends of the University are invited. The dates of these informal receptions, and the guests of honor, are as follows:

Friday, June 29, 4 P. M.,—Professor Scripture and Mr. McAllister of Yale University, Professor Richards of the State University of Iowa, Professor Carver of Oberlin College, Professor Green of Bethany College, Mr. Robarts Harper of London, Mr. Pearson of Northwestern University, Dr. Carr of Harvard University, and Professor Chollet of Columbia University.

Saturday, July 7, 5 P. M.,—President Draper, of the University of Illinois.

Saturday, July 21, 4 P. M.,—Professor Ripley, of Massachusetts Institute of Technology.

Saturday, July 28, 4 P. M.,—President Bashford, of Ohio Wesleyan University, and Judge Jacobs.

Friday, August 10, 4 P. M.,—President Mendenhall, of Worcester Polytechnic Institute.

Thursday, August 16, 4 P. M.,—President Gunsaulus, of Armour Institute of Technology.

Thursday, August 30, 4 P. M.,—President Thwing, of Western Reserve University.

Free Public Lectures and Entertainments.

(Including exercises of Commencement week.)

June 14, Thursday, 8 P. M., Joint Debate between Representatives of the Columbian and the Parthenon Literary Societies.

15, Friday, 8 P. M.,—Moot-Court.

16, Saturday, 8 P. M.,—Regents' Prize Declamation Contest.

17, Sunday, 10:45 A. M.,—Baccalaureate Sermon.

18, Monday, 1:30—5:00 P. M.,—Annual Exhibition of the Department of Drawing and Painting.

18, Monday, 8 P. M.,—Scott Prize Declamation Contest.

19, Tuesday, 9:00—12:00 A. M., and 2:00—5:00 P. M.,—Annual Exhibition of the Department of Drawing and Painting.

19, Tuesday, 10 A. M.,—Commencement Recital of the School of Music.

19, Tuesday, 2 P. M.,—Competitive Drill.

19, Tuesday, 8 P. M.,—Inter-Society Contest.

June, 20, Wednesday, 10 A. M.,—Company Competition for Corps Colors.

20, Wednesday, 2 P. M.,—Field Day.

20, Wednesday, 8 P. M.,—Wiles Prize Oratorical Contest.

21, Thursday, 10 A. M.,—Commencement Exercises. Address by Dr. John Fiske, of Cambridge, Mass.; subject, "Old and New Ways of Treating History."

21, Thursday, 2 P. M.,—Alumni business meeting.

21, Thursday, 8 P. M.,—Illustrated Lecture, by Mr. Robarts Harper, of London, England; subject, "Masterpieces of Architecture."

21, Thursday, 9:15 P. M.,—Commencement Reception in the Gymnasium.

23, Saturday, 8 P. M.,—Illustrated Lecture, From Hudson to Thames, Mr. Robarts Harper.

25, Monday, 8 P. M.,—Lecture-Recital, James Whitcomb Riley, Mr. P. M. Pearson.

26, Tuesday, 4 P. M.,—Lecture-Recital, Rudyard Kipling, Mr. P. M. Pearson.

26, Tuesday, 8 P. M.—Illustrated Lecture, A Holiday Trip to Europe, (England and Scotland), Mr. Robarts Harper.

27, Wednesday, 8 P. M.,—Lecture-Recital, Paul Dunbar, Mr. P. M. Pearson.

28, Thursday, 4 P. M.,—Lecture-Recital, Charles Dickens, Mr. P. M. Pearson.

28, Thursday, 8 P. M.,—Illustrated Lecture, Ireland, Mr. Robarts Harper.

29, Friday, 4 P. M.,—Reception at the President's house for students and others who desire to meet Professor E. W. Scripture, Mr. Robarts Harper, Mr. P. M. Pearson, and the other summer lecturers from other institutions.

29, Friday, 8 P. M.,—Lecture-Recital, Alfred Tennyson, Mr. P. M. Pearson.

30, Saturday, 4 P. M., Lecture-Recital, King and Field, Mr. P. M. Pearson.

30, Saturday, 8 P. M.,—Illustrated Lecture, The Rhine, Mr. Robarts Harper.

July 2, Monday, 4 P. M.,—Lecture, What is Education? Dr. A. S. Draper, President of the University of Illinois.

2, Monday, 8 P. M.,—Lecture, The Difference between the Pilgrims and the Puritans, President Draper.

3, Tuesday, 4 P. M.,—Lecture, The Evolution of the American School System, President Draper.

3, Tuesday, 8 P. M.,—Illustrated Lecture, Switzerland, Mr. Robarts Harper.

July 4, Wednesday, 4 P. M.,—Lecture, The Spirit of the Teacher, President Draper.

4, Wednesday, 8 P. M.,—Lecture, Abraham Lincoln: His Life in Illinois and the Presidency, President Draper.

5, Thursday, 4 P. M.,—Lecture, The Relations of Management and Instruction in the Schools, President Draper.

5, Thursday, 8 P. M.,—Illustrated Lecture, Under Italian Skies, Mr. Robarts Harper.

6, Friday, 4 P. M.,—Lecture, The Growth of American Universities, President Draper.

6, Friday, 8 P. M.,—Lecture, General Grant: From Galena to Riverside, President Draper.

7, Saturday, 4 P. M.,—Lecture, The Rise and Settlement of the Alabama Claims, President Draper.

(President Draper was a member of the Court which determined the claims made against the Geneva Award.)

7, Saturday, 5 P. M.,—Reception at the President's house for students and others who desire to meet President Draper.

7, Saturday, 8 P. M.,—Illustrated Lecture, Monte Carlo, Mr. Robarts Harper.

9, Monday, 8 P. M.,—Lecture-Recital, Thomas Bailey Aldrich, Professor Patterson.

10, Tuesday, 8 P. M.—Illustrated Lecture, Under the French Flag, Mr. Robarts Harper.

11, Wednesday, 8 P. M.—Lecture, How to Think Profitably, Professor E. W. Scripture, Yale University.

12, Thursday, 8 P. M.,—Illustrated Lecture, Paris, Mr. Robarts Harper.

13, Friday, 8 P. M.,—Lecture, Dickens, Professor Patterson.

14, Saturday, 8 P. M.,—Illustrated Lecture, Cuba and the War, Mr. Robarts Harper.

16, Monday, 8 P. M.,—Illustrated Lecture, Around the World in a Man o' War, Mr. Robarts Harper.

17, Tuesday, 8 P. M.,—Concert by the School of Music.

18, Wednesday, 4 P. M.,—Lecture, The Railroad Problem in New England, Professor Wm. Z. Ripley, of Massachusetts Institute of Technology.

18, Wednesday, 8 P. M.,—Lecture, Racial Origins of the English People, Professor Ripley.

19, Thursday, 4 P. M.,—Lecture, The Gas Problem in Massachusetts, Professor Ripley.

19, Thursday, 8 P. M.,—Lecture, Social Selection as a Factor in Evolution, Professor Ripley.

July 20, Friday, 4 P. M.,—Lecture, Regulation of Street Railways by Law, Professor Ripley.

20, Friday, 8 P. M.,—Lecture, The Ethnic Basis of the Eastern Question, Professor Ripley.

21, Saturday, 4 P. M.,—Reception at the President's house for students and others who desire to meet Professor Ripley.

21, Saturday, 8 P. M.,—Lecture-Recital, Charles Dickens, Professor Patterson.

23, Monday, 4 P. M.,—Lecture, The Administrative Work of the State of Massachusetts, Professor Ripley.

23, Monday, 8 P. M.,—Lecture, European Elements in our American Population, Professor Ripley.

24, Tuesday, 4 P. M.,—Lecture, Factory Legislation in Massachusetts, Professor Ripley.

24, Tuesday, 8 P. M.,—Lecture, Racial Aspects of the Philippine Problem, Professor Ripley.

25, Wednesday, 4 P. M.,—Lecture, Municipal Problems in the Eastern States, Professor Ripley.

25, Wednesday, 8 P. M.,—Lecture, Physical Environment as a Factor in the Development of Culture, Professor Ripley.

27, Friday, 8 P. M.,—Lecture, Oratory and Orators, Dr. James W. Bashford, President Ohio Wesleyan University.

28, Saturday, 4 P. M.,—Reception at the President's house for students and others who desire to meet President Bashford and Judge Jacobs.

28, Saturday, 8 P. M.,—Lecture, The Outlook, President Bashford.

30, Monday, 8 P. M.,—Lecture, The Science of Religion,—I. The Phenomena. President Bashford.

31, Tuesday, 8 P. M.,—Lecture, The Science of Religion,—II. The Phenomena Capable of Scientific Treatment. President Bashford.

August 1, Wednesday, 8 P. M..—Lecture, The Science of Religion,—III. The Hypotheses—Materialism, Pantheism. President Bashford.

2, Thursday, 8 P. M.,—Lecture, The Science of Religion,—IV. The Hypotheses—Theism. President Bashford.

3, Friday, 8 P. M.,—Lecture, The Science of Religion,—V. Revelation. President Bashford.

4, Saturday, 8 P. M.,—Lecture, The Science of Religion,—VI. Application of the Scientific Test of Experiment. President Bashford.

6, Monday, 8 P. M.,—Illustrated Lecture, Weighing the Earth. Dr. T. C. Mendenhall, President Worcester Polytechnic

Institute, Worcester, Mass.

(President Mendenhall was for a number of years Superintendent of the U. S. Coast and Geodetic Survey.)

August 7, Tuesday, 4 P. M.,—Lecture, The Evolution of Power, President Mendenhall.

7, Tuesday, 8 P. M.,—Illustrated Lecture, Earthquakes, President Mendenhall.

8, Wednesday, 4 P. M.,—Lecture, The United States Coast and Geodetic Survey, President Mendenhall.

(President Mendenhall was for several years Director of this Survey.)

8, Wednesday, 8 P. M..—Illustrated Lecture, The Doctrine of Chance, President Mendenhall.

(This lecture includes President Mendenhall's application of the law of chance to the Bacon-Shakesperean Controversy.)

9, Thursday, 4 P. M.,—Lecture, Student Life in Japan, President Mendenhall.

(This lecture is the outgrowth of President Mendenhall's life in Japan as professor in the Imperial University.)

9, Thursday, 8 P. M.,—Lecture, The Alaska Boundary, President Mendenhall.

(President Mendenhall was a member of the U. S. Commission on the Alaska Boundary.)

10, Friday, 4 P. M.,—Reception at the President's house for students and others who desire to meet President Mendenhall.

10, Friday, 8 P. M.,—Lecture, The Behring Sea Controversy, President Mendenhall.

11, Saturday, 8 P. M.,—Concert by the School of Music.

13, Monday, 8 P. M.,—Lecture, The Higher Ministries of Contemporary English Poetry, Dr. F. W. Gunsaulus, President Armour Institute of Technology, Chicago, Ill.

14, Tuesday, 8 P. M.,— Lecture, Matthew Arnold, President Gunsaulus.

15, Wednesday, 8 P. M.,—Lecture, Alfred Tennyson, President Gunsaulus.

16, Thursday, 4 P. M.,—Reception at the President's house for students and others who desire to meet President Gunsaulus.

16, Thursday, 8 P. M.,—Lecture, Robert Browning, President Gunsaulus.

20, Monday, 8 P. M.,—Elocutionary Recital, Professor Patterson.

August 12, Tuesday, 8 P. M.,—Lecture, Self Study,—The Basis of Natural Attention and Memory, Professor G. A. Schram, Buffalo, N. Y.

22, Wednesday, 8 P. M.,—Lecture, How and Why We Recollect, Professor Schram.

23, Thursday, 8 P. M.,—Lecture, Thought Memory and Verbal Memory; Conversational and Oratorical Power, Professor Schram.

24, Friday, 8 P. M.,—Organ Recital, Professor Ellenberger.

28, Tuesday, 8 P. M.,—Lecture, the American University,—Its Organization and Administration, Dr. Chas. F. Thwing, President Western Reserve University, Cleveland, Ohio.

29, Wednesday, 8 P. M.,—Lecture, The American University,—Its Chief Executive, President Thwing.

30, Thursday, 4 P. M.,—Reception at the President's house for students and others who desire to meet President Thwing.

30, Thursday, 8 P. M.,—Lecture, the American University,-Its Teaching of the Duty of Patriotic Service, President Thwing.

31, Friday, 8 P. M.,—Lecture, The American University,—Its Place in American Education and in Life, President Thwing.

West Virginia University

MORGANTOWN, W. VA.

THE A. B.-MEDICAL COURSE

April 1, 1900.

Morgantown, W. Va.
Published by the University.

Faculty Committee on the A. B.-Medical Course.

ALFRED EDWARD THAYER, M. D., Assistant Professor of Materia Medica, Pathology, and Bacteriology.

M. D., New York College of Physicians and Surgeons (Columbia University), 1884. Hospital practice, New York, 1884-6; graduate student, University of Göttingen, Germany, 1886-7; University of Vienna, Austria, 1887-8; Fellow in Pathology, Johns Hopkins University, 1889-90; Instructor in Anatomy, Medical Department, Yale University, 1890-1; Vital Statistician, New York City Health Dept., 1895-8; A. A. Surgeon, Marine Hospital Service, 1894 and 1898-9; present position since 1899.

ALEXANDER REID WHITEHILL, Ph. D., Professor of Chemistry.

A. B., Princeton University, 1874; A. M., *ibid.*, 1877; Ph. D., Washington and Jefferson College, 1887. Fellow in Experimental Science, Princeton University, 1874-5; graduate student, University of Leipzig and Freiberg School of Mines, Germany, 1874-5; Professor of Experimental Science, University Mound College, 1876-81; Principal Linsly Institute, 1881-5; present position since 1885.

OTTO FOLIN, Ph. D., Assistant Professor of Physiological Chemistry.

B. S., University of Minnesota, 1892; Ph. D., University of Chicago, 1896. Graduate student, University of Upsala, 1896, and Universities of Berlin and Marburg, 1897-8; Instructor in General and Medical Chemistry, McKillup Veterinary College, 1894-6; practical work in Columbus Medical and Food Laboratories, 1899; present position since 1899.

EDWIN BINGHAM COPELAND, Ph. D., Assistant Professor of Botany.

A. B., Leland Stanford Junior University, 1895; A. M. and Ph. D., University of Halle, Germany, 1896. Assistant in Biology, University of Wisconsin, 1893-4; Honorary Fellow in Botany, *ibid.*, 1896-7; Assistant Professor of Botany, Indiana University, 1897-8; Teacher of Science, State Normal School, Chico, California, 1899; present position since 1899.

JOHN BLACK JOHNSTON, Ph. D., Assistant Professor of Zoölogy.

Ph. B., University of Michigan, 1893; Ph. D., *ibid.* 1899. Graduate student and Assistant in Zoölogy, *ibid.*, 1893-7; Instructor in Zoölogy, *ibid.*, 1897-9; present position since 1899.

THE A. B.-MEDICAL COURSE.

This is a four years course leading to the Degree of Bachelor of Arts, including two years of medical study.

One of the greatest advances in recent medical education is the requirement on the part of medical schools that the degree of M. D. shall represent a certain amount of general culture as well as four years devoted to the special study of medical subjects. With this tendency the West Virginia University is thoroughly in accord; and the premedical course, formerly consisting of two years' work in medical branches has, therefore, been revised and extended to cover the first two years of a general scientific college course as well as the first two years of a medical course. The medical studies come in the last two years of the course after the student has laid a solid foundation for medical work in the preliminary scientific studies of the first two years of the course. He will then graduate with the degree of A. B. and a certificate of two years of medical study. An effort will be made to establish such relations with Medical Colleges that these two years will be counted everywhere as the equivalent of the first two years in a medical school. Thus the student will be able to complete half his medical course where expenses are low, where the classes are small and each student receives the professors' personal attention, and under the broadening influence of a university. When the student's theoretical training has been in great part completed he will be prepared to go to the medical school and profit by the clinical advantages there offered. Since some of the foremost schools of medicine are about to demand a college degree of all candidates for admission, the advantages of the plan suggested are at once apparent.

By arranging a preparatory course of four years with the idea that it shall lead up to the A. B.-Medical course, the University has established a course of eight years of preparatory and collegiate work which does not exclude general culture and yet bears the final purpose always in mind, thus enabling the student to specialize in scientific and medical lines almost from the time of his entrance.

Admission to the A. B.-Medical Course.

Candidates for admission must present certificates of good moral character, and if from other colleges or universities must bring letters of honorable dismissal.

Candidates for admission to the A. B.-Medical Course will be required to have completed the following preparatory work :

English,	9 courses ;
Latin,	6 courses ;
French,	6 courses ;
German,	6 courses ;
History,	2 courses ;
Civics,	1 course ;
Algebra,	2 courses ;
Plane Geometry,	2 courses ;
Physics,	2 courses ;
Chemistry,	3 courses ;
Total,	39 courses.

A "course" represents the amount of work done by a class meeting five times a week for one quarter (twelve weeks).

These preparatory studies may be taken at the Preparatory School of the University at Morgantown or elsewhere.

A. B.-Medical Preparatory Schedules.

Two schedules have been arranged for this work in the Preparatory School of the University at Morgantown :

1. A four years schedule for those who take all the preparatory work at the Preparatory School of the University, and who are not able to carry more than three courses during the first three years of the course ;

2. A three years schedule for those who have already completed the equivalent of three courses in English and are able to carry four courses during the three years.

1 Schedule Arranged for Four Years.

	FALL.	WINTER.	SPRING.
		FIRST YEAR.	
8:00	English 1	English 2	English 3
9:00	English History 5	U. S. History 6	Civics 1
11:00	Latin 1	Latin 2	Latin 3
		SECOND YEAR.	
10:00	Latin 4	Latin 5	Latin 6
11:00	English 4	English 5	English 6
12:00	French 1	French 2	French 3
		THIRD YEAR.	
8:00	Algebra 1	Algebra 2	Plane Geometry 1
9:00	German 1	German 2	German 3
12:00	French 4	French 5	French 6

FOURTH YEAR.

8:00	German 4	German 5	German 6
9:00	Chemistry 1	Chemistry 2	Chemistry 3
10:00	English 7	English 8	English 9
11:00	Plane Geometry 2	Physics 1	Physics 2

2 Schedule Arranged for Three Years.

FIRST YEAR.

8:00	Latin 1	Latin 2	Latin 3
9:00	English History 5	U. S. History 6	Civics 1
10:00	English 4	English 5	English 6
12:00	French 1	French 2	French 3

SECOND YEAR.

8:00	Algebra 1	Algebra 2	Plane Geometry 1
9:00	German 1	German 2	German 3
10:00	Latin 4	Latin 5	Latin 6
12:00	French 4	French 5	French 6

THIRD YEAR.

8:00	German 4	German 5	German 6
9;00	Chemistry 1	Chemistry 2	Chemistry 3
10:00	English 7	English 8	English 9
11:00	Plane Geometry 2	Physics 1	Physics 2

DESCRIPTION OF PREPARATORY COURSES

Required for Admission to the A. B.-Medical Course

As given in the Preparatory School at Morgantown.

In the following announcements, unless otherwise noted, each course described is a full course, the class meeting five times a week, Mondays to Fridays, inclusive, throughout one entire quarter. The quarter during which the course is given, as well as the hour and class room, are named, whenever possible, at the end of the announcement of each course. When a course is given more than once during the year, each quarter in which it is given is named.

All courses are designated by the name of the department and the number of the particular course. Thus the first course in German is known as "German 1;" the course in Organic Chemistry is known as "Chemistry 3," etc. The abbreviations used are: U., University Hall; S., Science Hall; M., Martin Hall.

English.

PROFESSOR MILLER AND MR. FRIEND.

FIRST YEAR.

1 **Grammar.** Harvey's Grammar, with careful drill in orthography, punctuation, etc. Fall, first section, 8:00; second section, 9:00; 22 U.

2 **Grammar.** Whitney's "Essentials of Grammar."
Winter, first section, 8:00; second section, 9:00; 22 U.

3 **Composition.** Reed and Kellogg's "Higher Lessons in English" to Lesson 112, with oral analysis and especial attention to synthetic exercises. Spring, first section, 8.00; second section, 9:00; 22 U.

SECOND YEAR.

4 **Composition.** Reed and Kellogg's "Higher Lessons in English," completed, with drill in composition.
Fall, first section, 10.00; second section, 11.00; 22 U.

5 **Composition.** Buehler's "Practical Lessons in English," with critiques and reviews. Careful reading, with analysis and word study, of one of the English classics required for entrance to College.
Winter, first section, 10.00; second section, 11.00; 22 U.

6 **Rhetoric.** Hill's "Elements of Rhetoric" to Chapter V, with one of the English classics as in Course 5.
Spring, first section, 10.00; second section, 11.00; 22 U.

THIRD YEAR.

7 **Rhetoric.** Hill's "Elements of Rhetoric," completed, with continued drill in composition and one of the English classics as in Course 5. Fall, 10.00; 16 U.

8 **Literature.** Irish's "Introduction to American Literature," with careful reading of some of the English classics required for entrance to College. In this and the following course the classics are read chronologically with a study of each author among his contemporaries, and as the representative of his period in literature and history.

Winter, 10.00; 16 U.

9 **Literature.** English Literature, including reviews and reading of the classics as in Course 8, continued. Spring, 10.00; 16 U.

Latin.

PROFESSOR HARE AND MR. BONDURANT.

FIRST YEAR.

1 **Etymology.** Chase and Stuart's "First Year in Latin," pages 9-125. Summer, 11.00; Fall, first section, 8.00; second section, 11.00; Winter, 8.00; Spring, 9.00; 13 M.

2 **Syntax.** Chase and Stuart's "First Year in Latin," pages 126-200. Summer, 8:00; Fall, 8:00; Winter, first section, 8:00; second section, 11.00; Spring, 9.00; 13 M.

3 **Oratio Obliqua, and Caesar** (Book I, chs. 1–29). Chase and Stuart's "First Year in Latin," completed.

Summer, 2.00; Fall, 8.00; Winter, 9.00; Spring, first section, 8.00; second section, 11.00; 13 M.

SECOND YEAR.

4 **Caesar's Gallic War** (Books I and II).

Summer, 10.00; Fall, 10.00; Winter, 9.00; Spring, 8:00; 13 M.

5 **Caesar's Gallic War** (Books III and IV). Winter, 10.00; 13 M.

6 **Cicero's First and Second Orations Against Cataline.**

Spring, 10:00; 13 M.

French.

PROFESSOR MCKENZIE AND MR. BALLARD.

1 **Elementary Course.** Grammar, reading, and as much practice as possible in pronunciation and conversation. Whitney's Grammar. Summer, 11.00; Fall, first section, 11.00; second section, 12.00; Spring, 9.00; 10 U.

2 **Elementary Course.** A continuation of Course 1. The Grammar will be finished, and the reading of easy French texts continued.

Summer, 9.00; Winter, first section, 11.00; second section, 12.00; 10 U.

3 **Modern Prose.** A continuation of Course 2. Reading from works by Erckmann-Chatrian, George Sand, etc.; Grandgent's "Materials for French Composition." It is expected that in Courses 1, 2 and 3 the elements of French grammar will be mastered, a fair pronunciation acquired, and 400 to 500 pages of modern prose and poetry read.

Spring, first section, 11.00; second section, 12.00; 10 U.

4 **Fiction and Poetry of the Nineteenth Century.** Works of Daudet, Theuriet, Dumas, de Maupassant, etc. Whitney's Grammar, part second. Practice in writing and speaking French continued through Courses 5 and 6. For students who have had one year of French.

Summer, Fall, 12.00; 10 U.

5 **Historical and Dramatic Works of the Nineteenth Century.** Works of Michelet, Labiche, Dumas, Scribe, Augier.

Winter, 12.00; 10 U.

6 **Dramas of the Seventeenth Century.** Corneille, Racine, Moliere. Spring, 12.00; 10 U.

German.

PROFESSOR TRUSCOTT AND MR. PORTERFIELD.

1 **Elementary German.** A course for beginners, the object being to acquaint the student with the elements of grammar, to give him a reading knowledge of the easiest German prose, and as much practice in pronunciation as possible. Thomas' Grammar, Part I; Harris' Reader, Part I. Summer, 9.00;

Fall, first section, 9.00; second section, 12.00; 17 U.

2 **Elementary German.** A continuation of Course 1. Reading of easy prose and poetry. Some poems will be memorized and especial attention given to correct pronunciation. Reading at sight. Harris' Reader, Parts II, IV and VI.

Winter, first section, 9.00; second section, 12.00; 17 U.

3 **Elementary German.** A continuation of Course 2. Reading and conversation. Elementary work in composition accompanied by a review of the Grammar. "Immensee." "Höher als die Kirche." "Im Zwielicht." Hatfield's "Materials for Composition."

Spring, first section, 9.00; second section, 12.00; 17 U.

4 **German Prose.** Copious reading of German prose to render the student familiar with the idioms of the language and give him a large and varied vocabulary. Nichol's "Three German Tales." Bernhardt's "Novelleten-Bibliothek." Fall, 8.00; 17 U.

5 **Composition and Conversation.** Practice in writing German and translation of English prose into idiomatic German. A part of the time will be devoted to exercises in conversation. "Methode Berlitz, Erstes Buch." Harris' "Prose Composition." Winter, 8.00; 17 U.

6 **German Poetry.** "Hermann und Dorothea." Familiar German ballads. Spring, 8.00; 17 U.

History.

PROFESSOR FAST AND ASSOCIATE PROFESSOR DANIELS.

5 **History of England.** This course will outline the history of England from the Teutonic settlements to the present time.

Fall, 9.00; 4 M.

6 **Outlines of United States History.** A general course of narrative and political history. Winter, 9.00 ; 6 M.

Civics.

PROFESSOR FAST.

1 **Civil Government in the United States.** A course with special reference to the origin of types of local government in the United States, embracing an outline of state and federal government. Two pieces of written work, prepared from material in the library, will be required : (a) A phase of colonial government ; (b) a phase of local government. Required for admission to all other courses in Political Science. Spring, 10.00 ; 6 M.

Algebra.

ASSISTANT PROFESSOR THOMPSON, DR. HILL AND MR. JOHNSON.

1 **Algebra,** up to and including Simple Equations. Charles Smith's "Elementary Algebra." Fall, 8.00 ; Winter, 11.00 ; Spring, 9.00 ; 19 U.

2 **Algebra,** up to and including Quadratics. Charles Smith's "Elementary Algebra." Fall, Winter, 8.00 ; Spring, 11.00 ; 19 U.

Plane Geometry.

ASSISTANT PROFESSOR THOMPSON AND DR. HILL.

1 **Plane Geometry.** The first two books. Wentworth's "Plane Geometry." Fall, 9.00 ; Spring, 8.00 ; 19 U.

2 **Plane Geometry.** Completed. Wentworth's "Plane Geometry." Fall, 11.00 ; Winter, 9.00 ; 19 U.

Physics.

PROFESSOR HODGES AND MR. WHITHAM.

1 **Elementary Physics.** Mechanics and Heat. Recitations, supplemented by experiments and laboratory exercises. One hour per week at least will be devoted to individual laboratory work. Wentworth and Hill's "Text Book of Physics." Prerequisite, Plane Geometry. Winter, 11.00 ; 11 S.

2 **Elementary Physics.** Electricity and Magnetism. Sound and Light. Continuation of Course 1. Spring, 11.00 ; 11 S.

Chemistry.

PROFESSOR WHITEHILL AND ASSISTANT PROFESSOR FOLIN.

1 **Inorganic Chemistry.** This course is designed for beginners, and serves as a general introduction to chemical methods and operations. It includes a systematic study of the laws of chemical combinations, the source, preparation, properties and compounds of the non-metallic ele-

ments and the principles and theories of chemical philosophy. Experimental lectures, laboratory work and recitations.

Summer, 10.00; Fall, first section, 9.00; second section, 11.00; Spring, 10.00; 20 S.

2 **Inorganic Chemistry.** This course includes the study of the metallic elements, and special attention is paid to the application of Chemistry in Agriculture, Engineering, Medicine, and every-day life. Lectures, laboratory work and recitations.

Winter, first section, 9.00; second section, 11.00; 20 S.

3 **Organic Chemistry.** This course includes the study of the more important organic compounds, together with the laboratory processes for the preparation of such compounds. Lectures, laboratory work and recitations. Winter, first section, 9.00; second section, 11.00; 20 S.

THE A. B.-MEDICAL COURSE.

The four years A. B.-Medical Course includes the following forty-two college courses, each course representing the amount of work done by a class meeting five times a week for one quarter (twelve weeks):

Zoölogy	6 courses	(2 years)
Chemistry	4 "	(2 ")
Botany	3 "	(1 year)
German	3 "	(1 ")
Electives	4 "	(1 1/3 ")
Preferably:		
General Hygiene		
Domestic "		
Public "		
Anthropology		
Anatomy	6 courses	(2 years)
Anatomical Laboratory	3 courses	(1 year)
Physiology	5 "	(1 2/3 years)
Histology	1 "	(1/3 year)
Pathology	2 "	(2/3 ")
Materia Medica	3 "	(1 ")
Bacteriology	1 "	(1/3 ")
Research and Thesis	1 "	(1/3 ")
Total,	42 "	

These courses may be taken in four years according to the following

Four Years Schedule For A. B - Medical Course.

FIRST YEAR.

	FALL	WINTER	SPRING
8:00	Zoölogy 1	Zoölogy 2	Zoölogy 3
10:00	German 10	German 11	German 12
11:00	Elective (General Hygiene)	Elective (Domestic Hygiene)	Elective (Public Hygiene)
1:30	Chemistry 4	Chemistry 5	Chemistry 7

SECOND YEAR.

8:00	Zoölogy 9	Zoölogy 10	Zoölogy 11
10:00	Chemistry 11	Chemistry 12	Chemistry 13
1:30	Botany 3	Botany 4	Botany 5

THIRD YEAR.

8:00	Anthropology		
9:00	Anatomy 1	Anatomy 2	Anatomy 3
10:00	Histology 1	Pathology 1	Pathology 2
11:00		Physiology 1	Physiology 2
1:30		Anatomy Laboratory	Anatomy Laboratory

FOURTH YEAR.

9:00	Physiology 3	Physiology 4	Physiology 5
10:00	Anatomy 4	Anatomy 5	Anatomy 6
11:00	Meteria Medica 1	Materia Medica 2	Materia Medica 3
1:30	Bacteriology and Hygiene	Anatomy Laboratory	Research and Thesis

Throughout the final quarter of the last year the student will carry on research work in some one of the laboratories; the results he will present in his thesis, which, if deemed worthy, will be published.

Journal Clubs.

A further decipline of great practical value in the training of the physician is found in the Journal Clubs maintained in connection with the Chemical, Biological and Medical Laboratories.

As the student is required to have a reading knowledge of both French and German, the files of the foreign periodicals and the text and reference works in these languages in the University Library, are available for constant study and reports by the students. Such use of the literature of the subjects taught is required in each of the scientific departments; which enable the student to learn how to use a library, to keep up with the advance of science, and also to inform himself as to the methods of research.

A more detailed statement of the purely medical work of the third and fourth years, together with the separate descriptions of the courses in another part of this circular, will show the extent and coördination of the various studies.

THIRD YEAR.

	FALL	WINTER	SPRING
8:00	Anthropology		
9:00	Anatomy throughout the year, viz.—		
	Osteology	Arthrology Myology	Angeiology. Splanchnology.
10:00	Histology Laboratory Course	General Pathology. Lecture Course	Special Pathology. Laboratory Course
11:00		Physiology throughout two quarters, viz.—	
		Cytology, Histology. Blood, Neuro-Muscular.	Circulation Respiration
1:30		Anatomy Laboratory, one course in each of two quarters; one lateral half of the body dissected and demonstrated.	

FOURTH YEAR.

	FALL	WINTER	SPRING
9:00	Physiology throughout the year, viz.—		
	Digestion Absorption Excretion	Tissue Metabolism Locomotor Mechanism Special Senses	Nervous System Reproduction
10:00	Anatomy throughout the year, viz.—		
	Splanchnology Neurology	Neurology Special Senses	Embryology
11:00	Materia Medica throughout the year, viz.—		
	Drugs, preparations, doses, etc., through Antiseptics	Text Book finished	Therapeutics, Prescription Writing, Review of principal drugs.
1:30	Bacteriology and Hygiene, Laboratory	Anatomy Laboratory	Research and Thesis

COURSES OF INSTRUCTION.

Only the courses which are included in the A. B.-Medical Course outlined above are described here. In the various departments many other courses of interest and value to the medical student are given ; and if time permits the student is earnestly advised to take several of these. For descriptions of these additional courses the student is referred to the complete departmental announcements in the catalogue.

Zoölogy.

ASSISTANT PROFESSOR JOHNSTON.

1 **Elementary Zoölogy.** A study of types (Amoeba, Paramoecium, Sponge, Hydra) of the lower classes of animals with reference to structure, functions, and relationships, and of the cell and cell division. Laboratory work and lectures.

Prerequisite : satisfactory evidence of ability to write clear, forcible English.

Fall, lectures M., W , at 8:00. Laboratory work six hours a week at hours to be arranged, in the forenoons.

2 **Elementary Zoölogy.** A continuation of Course 1, studying the earthworm and beginning the study of the structure and development of the Frog, as an introduction to vertebrate zoölogy.

Winter, lectures M., W., at 8:00. Laboratory work six hours a week, forenoons.

3 **Elementary Zoölogy.** Continuation of Course 2.

Winter, lectures M., W., at 8:00. Laboratory work six hours a week, forenoons.

9 **Vertebrate Embryology.** Laboratory work on the maturation, fertilization, and cleavage of the ovum, and on the development of the chick ; lectures on the comparative embryology of vertebrates.

Prerequisite : Course 3.

Fall, lectures, Tu., Th., at 8:00. Laboratory work eight hours, forenoons.

10 **Comparative Anatomy of Vertebrates.** Laboratory study of types, with lectures on the comparative anatomy of vertebrates, with especial reference to the factors in the progressive modification of organs.

Prerequisite : Course 9.

Winter, lectures Tu., Th., at 8:00. Laboratory work eight hours, forenoons.

11 **Comparative Anatomy of Vertebrates.** Continuation of Course 10. Spring, lectures, Tu., Th., at 8:00. Laboratory work eight hours, forenoons.

Chemistry.

PROFESSOR WHITEHILL AND ASSISTANT PROFESSOR FOLIN.

4 Qualitative Analysis. A laboratory course designed for students who are familiar with the elementary principles of Chemistry. It includes the preparation of the more important gases and salts, and the detection of the elements and their compounds.

Half course, first five weeks, Summer, 2:00;
One-third course, Fall, Tuesdays, Thursdays, 1:30; 22 S.

5 Elementary Quantitative Analysis. This course includes a small number of simple gravimetric, volumetric, and electrolytic determinations, together with the study of the operations involved. Laboratory course. Half course, second five weeks, Summer, 2:00; 22 S.
One-third course, Winter, Tuesdays; Thursdays, 1:30; 22 S.

7. Toxicology. Especially designed for medical students. The course will include a study of inorganic and organic poisons, their physiological effects and antidotes. Laboratory course.

Spring, Tuesdays, Thursdays, 1:30; 22 S.

11 Medical Organic Chemistry. This is a lecture and laboratory course in such special subjects of Organic Chemistry as carbohydrates, fats, proteins, and foods in general, together with certain organic amido- and other nitrogenous compounds. Fall, 10:00 to 12:00; 21 S.

12 Physiological Chemistry. This course is a continuation of Course 11 and includes lectures and laboratory work on ferments, digestion, respiration, nutrition and general animal metabolism.

Winter, 10:00 to 12:00; 21 S.

13 Medical Analysis. This course includes the study and practice of all the essential analytical methods as used in modern practice of medicine. Spring, 10:00 to 12:00; 21 S.

Botany.

ASSISTANT PROFESSOR COPELAND.

3 The Algæ. The algæ will be studied along physiological as well as morphological lines. Being the simplest typical plants they are well adapted to serve as material for a thorough introductory study of the plant cell. One or two lectures weekly and six or eight hours laboratory work with microscope. Fall, 1:30 to 3:30; 30 U.

4 Fungi and Bryophytes. A study of the morphology and taxonomy of these groups. One lecture and eight hours laboratory work. Prerequisite, Course 3. Winter, 1:30 to 3:30; 30 U.

5 Vascular Plants. This course will be in considerable part laboratory work, bringing out the relation of the flowering plants to the lower groups, with some field work. One lecture weekly, and four laboratory periods. Prerequisite, Course 4. Spring, 1:30 to 3:30; 30 U.

Hygiene.

ASSISTANT PROFESSOR CLARK.

(Elective.)

1 **General Hygiene.** This is introductory to Course 2, though complete in itself. Questions relating to the health of the individual are considered: the care of lungs, skin, eyes, digestion, the development of the body by indoor and outdoor exercise, the conservation of nervous and muscular force, and the conditions favorable for physical and intellectual work. Lectures and assigned readings. Fall, 11:00.

2 **Domestic Hygiene.** The home, its organization and conservation. A. The functions and development of the home. B. The house: site, architecture, construction, plumbing and sewage, heating, lighting, ventilation, furnishing and decorating, cleaning. Lectures, topical investigation and inspection of houses. Prerequisite, General Hygiene. Winter, 11:00.

3 **Public Hygiene.** Among the subjects discussed are: the care of streets and alleys, system of sewerage and garbage disposal, the inspection of food supplies, the prevention of epidemics, building and plumbing regulations, sanitary regulations. Lectures and research work. Prerequisite, Domestic Hygiene. Spring, 11:00.

Anthropology.

PRESIDENT RAYMOND.

(Elective.)

1 **Anthropology.** An elementary course on man as the unit of society, and on the evolution of society and social institutions. The general purpose of the course is to point out how man has developed into his present social state, what the influences were which caused this development, and how these influences themselves have evolved. The general subjects discussed are: first, the antiquity of man, and the place man occupies in nature; second, the origin and early development of institutions which have made man what he is, and upon which contemporary society is based, such as language and writing, the arts of life and of pleasure, religion and science, mythology and history, the family and social structure. Tylor's "Anthropology," supplemented by lectures and assigned readings. Summer, Fall, 8:00; 10 S.

Anatomy.

1 **Anatomy.** This course will consist of a thorough study of the skeleton and of the single bones through one quarter, an adequate supply enabling the student to study the actual bones as well as the text book. Daily recitations and demonstrations. Prerequisites, French 6, German 6, Physics 2, and Zoölogy 11. Fall, 9:00.

2 Anatomy. The articulations and the muscles will be studied by text, demonstration and dissection. Prerequisite, Anatomy 1.

Winter, 9:00.

3 Anatomy. The circulatory system and some of the viscera are studied during the third quarter of the third year. Dissection is carried on through the second and third quarters until one lateral half of the body has been studied and demonstrated by the student to the satisfaction of the instructor. Prerequisite, Anatomy 2. Spring, 10:00.

4 Anatomy. The remainder of the viscera and part of the nervous system will be covered in this course ; methods of study as outlined above. Prerequisite, Anatomy 3. Fall, 10:00.

5 Anatomy. The nervous system is completed and the organs of the special senses are studied. Prerequsite, Anatomy 4.

Winter, 10:00.

6 Anatomy. Surgical and regional anatomy, surface land-marks, etc. will be taught for half the quarter. In this work the living model will be used as much as possible. Embryology (human) will occupy the second half. Prerequisite, Anatomy 5. Spring, 10:00.

Physiology.

1 Physiology. The subject is begun in the second quarter of the third year, after the student has had one quarter in Anatomy and the same in Histology. The physiology of the cells, the tissues and the blood is taught by recitations, lectures and laboratory methods. Prerequisites, Anatomy 1, Histology 1. Winter, 11:00.

2 Physiology. The heart and blood vessels, blood pressure, vasomotor phenomena, and pulmonary and tissue respiration are taught as above. Prerequisite, Physiology 1. Spring, 11:00.

3 Physiology. The first quarter of the fourth year is devoted to the study of digestion, absorption and excretion. Prerequisite, Physiology 2. Fall, 9:00.

4 Physiology. The subjects treated in this quarter are tissue metabolism, the locomotor mechanism and the special senses. Prerequisite, Physiology 3. Winter, 9:00.

5 Physiology. The functions of the nervous system and the physiology of reproduction complete the course. It will be noticed that the work in Anatomy and Physiology makes each the supplement of the other, so that the student acquires a knowledge of function while engaged upon the study of structure. Prerequisite, Physiology 4. Spring, 9:00.

Text and reference books :

Anatomy: Gray, Morris, American Hand-book, Sharpey and Quain, Holden's Osteology.

Physiology: Foster, Kirke, Landois and Stirling, American Hand-book.

Embryology: Hertwig, Minot, Balfour (Comparative).

Histology, Pathology, Bacteriology and Materia Medica

ASSISTANT PROFESSOR THAYER.

Histology.

1 **Histology.** This course teaches the student the varieties of animal and human cells and tissues in the normal condition, and also the various methods employed in their study. Each student is expected to make a collection of 150 to 200 slides for future use. Prerequisites, French 6, German 9, Zoölogy 11. Laboratory. Fall, 10:00; 1 U.

2 **Histology.** Students who have displayed interest and ability may carry on more advanced work in the normal tissues. Laboratory. Prerequisite, Histology 1. Hours to be arranged.

Pathology.

1 **Pathology.** A lecture course in General Pathology with demonstrations where practicable. As much as possible of the field of Comparative Pathology is covered, although the course is designed strictly for prospective physicians, and human diseases are the chief object of study. Prerequisite, Histology 1. Winter, 10:00; 1 U.

2 **Pathology.** Ample material has been provided to give a complete laboratory course in morbid human tissues. The student makes a collection of 150 slides and studies them. Prerequisites, Histology 1, Pathology 1. Spring, 10:00; 1 U.

3 **Pathology.** A special course in Experimental Pathology will be given to advanced students in limited numbers. This may be taken as an elective course in preparation for a thesis. Prerequisite, Pathology 2. Hours to be arranged.

Materia Medica.

1 **Materia Medica.** Drugs, their properties, preparations and doses will be taught by recitations, lectures, and laboratory. The ground covvered in this course includes the chief inorganic drugs and the antiseptics. A cabinet of the most important medicines has been formed to assist the student in his work. Prerequisites, Botany 5, Anatomy 3, Physiology 2, Pathology 2, Latin 6, French 6, German 9. Fall, 11:00; 1 U.

2 **Materia Medica.** In this course the text book (provisionally Bartholow, 10th Edition) will be completed, and the regular recitations supplemented by lectures, which will form a larger proportion of the course than in Materia Medica 1. Prerequisite, Materia Medica 1. Winter, 11:00; 1 U.

3 **Materia Medica.** This course is practical as far as possible, including the application of healing agencies of all kinds, with assistance derived from the methods of clinical diagnosis. The instruction will be given by lectures, recitations, and the free use of the chief domestic and

foreign periodicals. Each student will be required to make frequent reports before the class of recent therapeutic advance and take part in the discussion of the subjects presented. Prerequisite, Materia Medica 2.

Spring, 11:00; 1 U.

Bacteriology.

1 Bacteriology. A course of actual laboratory work of two hours daily duration during one quarter, supplemented by lectures and informal talks. The preparation of culture media, the methods of detection and identification of bacteria, and the verification of results by experiment, with the delicate and complicated technique involved, will be thoroughly taught, and, as in Histology 1 and Pathology 2, the student makes a collection of typical specimens. Prerequisites, Histology 1, Pathology 2, Botany 5. Fall, 1:30. 1 U.

2 Bacteriology. A course, chiefly consisting of lectures, on the important subjects of Hygiene and Sanitation, with especial reference to the applications of Bacteriology in the entire field. Elective. Hours to be arranged.

Synoptic Lectures.

History of Medicine. During the Spring Quarter of 1900 a series of lectures on the History of Medicine will be given, one each week, open to all students and their friends. Monday, 7:00; 23 S.

Vital Statistics and Public Health. One lecture a week during the Summer Quarter.

Laboratory Fees.

In Histology 1, Pathology 2, and Bacteriology 1, a laboratory fee of five dollars will be charged in each case, to cover the cost of slides, cover glasses and expensive reagents and the inevitable breakage of glassware and apparatus.

Books.

The following books are recommended as text or reference:

Histology, *Stöhr, Clarkson.
Pathology, *Ziegler, *Delafield and Prudden, Orth.
Bacteriology, *Abbott, Sternberg, Flugge.
Materia Medica, *Bartholow, Potter.
Pharmacology, *Cushny.
Therapeutics, *Hare, Ringer.
Urinalysis, Purdy.
Medical Dictionary, Gould, Duane, Dunglison, Billings.
U. S. Dispensatory.
Pharmacopœia.

In every case the latest edition should be bought. In the above list, books marked with a star will be used as text books, and others for reference. As the University library contains them all, the student should familiarize himself with them at his convenience; those which he needs may be purchased at about cost through the University Book Store.

The University Year.

The University is virtually in continuous session, the three months vacation in summer having been abolished, so far as the University itself is concerned. The University year is divided into four quarters, of twelve weeks each, with recesses of one week between quarters. No student or instructor is expected to work at the University more than nine months out of twelve, unless he desires to do so. Under this system a student may begin his work at the beginning of any quarter, and may take his vacation either during the Summer Quarter, or during the Fall, Winter or Spring Quarter. He is, however, at liberty to continue his University work during all the four quarters, if he is strong enough, and desires to do so. Similarly, an instructor may arrange to take his vacation during any quarter of the year, provided arrangements can be made in regard to the instruction in his department. The courses of instruction are arranged so that the work of each quarter is complete in itself. The classes in most subjects meet five times a week, enabling many topics to be covered in single quarters, and many more new classes to begin with each quarter than is possible under any other system. Courses for which there is great demand are given more than once in the same year, so that any student in attendance during that year may have the opportunity of taking them, in whatever quarter or quarters he takes his vacation.

University Fees.

Except in the School of Music, tuition is free to West Virginia students. To students from other states the tuition is:

In the Preparatory School, $5.00 per quarter;

In the Commercial School, $5.00 per quarter;

In the College of Law, $8.00 per quarter;

In the other colleges, $12.50 per quarter.

The matriculation fee is $5.00, payable upon entering the University by all students. Unless the student remains out of the University more than three years, the matriculation fee is paid but once.

The contingent fee is $2 per quarter.

Students taking laboratory courses pay the following fees to cover the cost of material used: General Chemistry, Botany, and Zoölogy, $2 per quarter; Analytical Chemistry, $6.50 per quarter; Physiological Chemistry, $6.50 per quarter; Histology 1, Pathology 2, Bacteriology 1, $5.00 per quarter.

Board and Lodging.

It is possible to secure board and lodging in Morgantown for $3.00 per week. Most students, however, pay from $3.25 to $4.00 per week.

University Bulletin. Series 1, No. 5.

Issued Quarterly.

Entered at the Postoffice at Morgantown, West Virginia,
as Second Class Matter.

West Virginia University

CATALOGUE

1901-1902.

MORGANTOWN, W. VA.
PUBLISHED BY THE UNIVERSITY.

West Virginia University

CATALOGUE

1901-1902.

ANNOUNCEMENTS

1902-1903.

MORGANTOWN, W. VA.
PUBLISHED BY THE UNIVERSITY.

CONTENTS.

	Page.
Calendar,	7
Board of Regents,	8
Officers of Instruction,	9
Library Staff,	16
Agricultural Experiment Station Staff,	16
University Organization,	18
Buildings,	19
Departmental Equipments,	21
General Information,	26
Christian Associations,	26
Central Oratorical League,	26
Societies,	27
Prizes,	27
Theses,	29
Discipline,	29
Chapel Exercises,	30
Church Halls,	30
Athletics,	31
University Fees,	31
Expenses,	32
Aid for Students,	33
Approved Boarding and Rooming Places,	33
Teachers' Bureau of Information,	34
Accredited Preparatory Schools,	34
Matriculation and Registration,	36
University Library,	37
College of Arts and Sciences,	39

Entrance Requirements, ... 40
Degrees, ... 48
Departments of Instruction, ... 51
Pharmacy, ... 86
Fine Arts, ... 89
College of Engineering and Mechanic Arts, ... 92
College of Agriculture, ...119
Agricultural Experiment Station,.....134
College of Law, ...136
School of Music, ...146
School of Military Science and Tactics, ...154
Commercial School, ...163
The Preparatory School at Morgantown, ...170
The Preparatory School at Montgomery, ...179
Lists of Students, ...180
Summary of Students, ...213
Degrees Conferred in 1901, ...216

CALENDAR.

1902.

September 15, Monday, ...Fall Quarter Begins.
September 15, 16, 17, Monday, Tuesday and Wednesday, ...
.....Entrance Examinations.
September 16 and 17, Tuesday and Wednesday, ...
.....Matriculation and Registration of Students.
September 17, Wednesday, 7:30 P. M.....Fall Convocation.
September 18, Thursday, ...Recitations of Fall Quarter Begin.
November 27 to November 30, Sunday inclusive, ...
..... Thanksgiving Recess.
December 12, Friday, ...Last recitations of Fall Quarter.
December 15, Monday, to December 17, Wednesday, inclusive....
.....Final examinations of Fall Quarter.
December 18, Thursday, to January 1, 1903, inclusive, ...
..... Quarterly Recess.

1903.

January 2, Friday, (Registration Day).....Winter Quarter Begins.
January 2, Friday, 7:30 P. M., ...Quarterly Convocation.
January 5, Monday, ...First Recitations of Winter Quarter.
March 23, Monday, ...Last Recitations of Winter Quarter.
March 24, Tuesday, to March 26, inclusive .....
.....Final Examinations of Winter Quarter.
March 26, Thursday, ...Winter Quarter Ends.
March 27, Friday, to March 31, Tuesday, ...Quarterly Recess.
April 1, Wednesday, (Registration Day) .....Spring Quarter Begins.
April 2, Thursday, ...Recitations of Spring Quarter Begin.
May 30, Saturday .....Memorial Day; a holiday.
June 9, Tuesday, ...Last Recitations of Spring Quarter.
June 10, Wednesday, to June 13, Saturday, inclusive, ...
.....Final Examinations of Spring Quarter.
June 18, Thursday, ...Commencement.

BOARD OF REGENTS.

FOR THE TERM BEGINNING MAY 19, 1901.

For Two Years.

J. R. TROTTER, Buckhannon.
J. B. FINLEY, Parkersburg.
C. R. OLDHAM, Moundsville.
C. M. BABB, Falls.

For Four Years.

C. E. HAWORTH, Huntington.
J. M. HALE, Princeton.
E. M. GRANT, Morgantown.
D. C. GALLAHER, Charleston.
W. J. W. COWDEN, Wheeling.

OFFICERS OF THE BOARD.

W. J. W. COWDEN, ...President.
J. S. STEWART, ...Secretary.
A. R. WHITEHILL, ...Treasurer.
W. J. WHITE, ...Auditor.

Board of Regents of the Montgomery Preparatory School.

THOS. C. MILLER, State Superintendent of Schools, ex-officio.
D. C. GALLAHER, Charleston.
C. E. HAWORTH, Huntington.

Board of Regents of the Keyser Preparatory School.

THOS. C. MILLER, State Superintendent of Schools, ex-officio.
THOMAS B. DAVIS, Keyser.
LEWIS J. FORMAN, Petersburg.
J. W. GOODSELL, Davis.
A. N. McKEEVER, Romney.
W. A. WATSON, Fellowsville.
JAMES SITES, Upper Tract.

OFFICERS OF INSTRUCTION

AND

ADMINISTRATION.

THE FACULTY.

DANIEL BOARDMAN PURINTON, Ph.D., LL.D., President and Professor of Philosophy.

A.B., West Virginia University, 1873; A.M., *ibid.*, 1876; Ph.D., University of Nashville 1892; LL. D., Denison University, 1889. Instructor Preparatory Department of West Virginia University, 1873--9; Professor of Logic, *ibid.* 1879--81; Professor of Mathematics, *ibid.* 1881--5; Professor of Metaphysics, *ibid* 1885--9; Vice President and Acting President, *ibid*, 1881--2; Instructor in Vocal Music, *ibid*, 1873--89; President Denison University, 1890--1901; present position since 1901. Author "Christian Theism," 1889.

POWELL BENTON REYNOLDS, D.D., Chaplain, and Professor of Economics and Sociology.

A.M., West Virginia University, 1887; D.D., Richmond College, 1890. Student, Richmond College, 1866-70. President Shelton College, 1872--84; President Buckner College, 1884-5; Professor of English, West Virginia University, 1885-9; Vice President and Professor of Metaphysics, *ibid.*, 1889-93; Acting President, *ibid.*, 1893-5; Professor of Metaphysics and Political Science, *ibid.*, 1895-7; Professor of Philosophy, 1897-1901; Acting President 1901; present position since 1901.

WAITMAN BARBE, A.M., M.S., Assistant to the President, Associate Professor of the English Language and Literature, and Field Agent.

B.S., West Virginia University, 1884; M.S., *ibid.*, 1887; A.M., 1897. City editor "Daily State Journal," Parkersburg, W. Va., 1885-9; Managing editor, *ibid.*, 1889-95; Regent West Virginia State Normal Schools, 1895-1901; Field Agent, West Virginia University, 1895-8; Graduate student, Harvard University, 1900; present position since 1898.

ST. GEORGE TUCKER BROOKE, LL.D., Professor of Common and Statute Law.

A.M. West Virginia University, 1889; LL.D., Wake Forest College, 1890. Student, University of Virginia Law School, 1867-9; member bar, Charles Town, W. Va., since 1869; present position since 1878.

WILLIAM P. WILLEY, A.M., Professor of Equity Jurisprudence and Commercial Law.

A.B., Dickinson College 1862; A.M., *ibid.*, 1865; member bar, Morgantown, W. Va., and Baltimore, Md., 1865-78; editor Wheeling "Register," 1878-83; present position since 1883.

ALEXANDER REID WHITEHILL, Ph.D. Professor of Chemistry.

A.B., Princeton University, 1874; A.M., *ibid.*, 1893-5; Ph.D., Washington and Jefferson College, 1887. Fellow in Experimental Science, Princeton University, 1874-5; Graduate student, University of Leipzig and Freiberg School of Mines, Germany, 1874-5; Professor of Experimental Science, University Mound College, 1876-81; Principal Linsly Institute, 1881-5; present position since 1885.

JOHN LINDSAY JOHNSTON, C.E., Professor of Civil and Mining Engineering.

B.S., West Virginia University, 1883; M.S., *ibid.*, 1886; C. E., *ibid.*, 1889. Assisting Locating Engineer, W. V. & P. R. R., 1883-5; Draughtsman, C. W. & B. R. R., 1875; Locating and Construction Engineer W. & C. Natural Gas Company, Pittsburg, 1885-6; Assistant to Division Engineer, B. & O. R. R., 1886; Assistant Engineer, Penna. R. R., 1886-90; Instructor in Engineering, West Virginia University, 1890-1; Professor of Applied Mathematics and Drawing, *ibid.*, 1891-3; present position since 1893.

SAMUEL B. BROWN, A.M., Professor of Geology and Mineralogy.

A.B., West Virginia University, 1883; A.M., *ibid.*, 1886. Graduate student, National Museum, 1884; Harvard University, 1891; Teacher of Languages and Mathematics, Martinsburg, W. Va., 1883-5; Principal Glenville State Normal School, 1885-90; Assistant in Geology, West Virginia University, 1890-2; present position since 1892.

JAMES SCOTT STEWART, M.S., Professor of Mathematics.

B.S., West Virginia University, 1877; M.S., *ibid.*, 1880. Assistant in Preparatory School, West Virginia University, 1877-91; Professor of Mathematics, *ibid.*, 1891-3; Superintendent of Schools, Fairmont, W. Va., 1893-4 present position since 1894.

ROBERT WILLIAM DOUTHAT, Ph.D., Professor of the Latin Language and Literature.

A.M., Emory and Henry College, 1874; Ph.D., Roanoke College, 1877. Professor of Languages, Missouri University School of Mines and Metallurgy, 1873-84; President Collegiate Institute (New Mexico), 1884-7; President Collegiate Institute (Arkansas), 1887-9; Professor of Languages, Kentucky Military Institute, 1889-90; President Barboursville College, 1890-5; Professor of Ancient Languages, West Virginia University, 1895-7; present position since 1897.

BERT HOLMES HITE, M.S., Professor of Agricultural Chemistry, and Chemist of the West Virginia Agricultural Experiment Station.

M.S., West Virginia University, 1890. Graduate student, Johns Hopkins University, 1891-5; Fellow in Chemistry, *ibid.*, 1893-5; Chemist of the West Virginia Agricultural Experiment Station since 1895; Professor of Organic Chemistry, West Virginia University, 1895-7; present position since 1897. Chief Chemist of the Geological and Economic Survey of West Virginia.

OKEY JOHNSON, LL.B., A.M., Dean of the College of Law, and Professor of Constitutional and International Law and the Law of Corporations.

LL.B., Harvard University, 1858; A.M., Marietta College, 1874; Admitted to the bar, 1858; Attorney-at-law, Middlebourne, 1858-62; Parkersburg, 1862-77; Member of West Virginia Senate, 1870-1; Member of West Virginia Constitutional Convention, 1872; Judge of West Virginia Supreme Court of Appeals, 1877-90; President, *ibid.*, 1883-90; Attorney-at-law, Charleston, 1890-5; present position since 1895.

THOMAS EDWARD HODGES, A.M., Professor of Physics.

A.B., West Virginia University, 1881; A.M., *ibid.*, 1884; Principal, Morgantown Public Schools, 1881-6; Principal and Instructor in Natural Science and Pedagogy, Marshall College State Normal School, 1886-96; Graduate student, Cornell University, Summer, 1897; present position since 1896.

ANDREW DELMAR HOPKINS, Ph.D., Professor of Economic Entomology, and Vice Director and Entomologist of the West Virginia Agricutural Experiment Station.

Ph.D., West Virginia University, 1893; Special agent in Entomology, West Virginia Agricultural Experiment Station, 1890-1; Entomologist, *ibid.*, since 1891; Professor of Economic Entomology, West Virginia University, since 1896; Vice-Director of the Experiment Station since 1897.

THOMAS CLARK ATKESON, Ph.D., Dean of the College of Agriculture, and Professor of Agriculture.

LL.B., Kentucky University, 1874; Ph.B., Central Normal College, 1891; Ph.D., *ibid.*, 1893; M.S., Barboursville College, 1900; Student Kentucky A. & M. College, 1874-6; Editor "W. Va. Agriculturist," 1873-4; Associate Editor "Farmer's Friend," since 1882; Associate Editor "Grange Bulletin and Scientific Farmer," since 1893; Member of the W. Va. State Board of Agriculture and Farmers' Institute Lecturer, since 1891; Professor of Agriculture, W. Va. University, 1891-3; W. Va. State Grange Secretary, 1882-4; Lecturer, 1884-6; Overseer, 1886-96; Master, since 1896; Regent W. Va. University, 1897; President Barboursville College, 1896-7; present position since 1897.

FREDERICK LINCOLN EMORY, B.S., M.M.E., M.E., Professor of Mechanics and Applied Mathematics and Superintendent of Buildings and Grounds.

B.S., Worcester, Mass., Polytechnic Institute, 1887; M.M.E., Cornell University, 1896; Director Mechanical Department, Washington, D. C., High School, 1887-90; Superintendent Trades School, Concord Junction, Mass., 1890-1. Professor of Mechanical Engineering and Mechanic Arts, West Virginia University, 1891-3; Director, Indianapolis, Ind., Industrial Training and Technical High School, 1893-5; Graduate student, Cornell University, 1895-6; M.E., Worcester Polytechnic Institute, 1899; Member American Society of Mechanical Engineers; Member Society Adv. Eng. Education; present position since 1897.

ALFRED JARRETT HARE, A.B., Professor of the Latin Language and Literature and Principal of the Preparatory School.

A.B., West Virginia University, 1889; Assistant in Latin and Mathematics, Preparatory School, West Virginia University, 1889-96; Preparatory Professor of Ancient Languages and Mathematics, *ibid.*, 1896-8; Professor of Latin, 1898-1901; Graduate student, Harvard University, 1901; present position since 1901.

RICHARD ELLSWORTH FAST, LL.B., Ph.B., Professor of American History and Political Science.

LL.B., West Virginia University, 1896; Ph.B., *ibid.*, 1898; Hon. A.M., Bethany College, 1898. Practicing law, 1886-97; student, Harvard University, 1897; member West Virginia Senate, 1896-1900; Colonel 1st Infantry, W. V. N. G., 1893-7; Colonel, aide-de-camp, General Staff, W. V. N. G., 1899; Acting Commandant of Cadets, West Virginia University, 1897-1900; Instructor in American History and Political Science, *ibid.*, 1897-8; Assistant Professor, *ibid.*, 1898-9; present position since 1899.

CHARLES HENRY PATTERSON, A.M., Professor of Rhetoric and Elocution and Acting Head of the Department of English.

A.B., Tufts College, 1887; A.M., *ibid.*, 1893. Student in Elocution, 1887-8; Principal of High School, West Newbury, Mass., 1888-89; Principal and teacher of English and Elocution, Preparatory School, Turners Falls, Mass., 1889-91; student of dramatic art, Boston Museum, Margaret Mather and other companies, 1891-3; graduate student in English, Tufts College, 1891-3; Principal and teacher of English and Elocution, Preparatory School, Hinsdale, N. H., 1893-8; student, School of Expression, Boston, Mass., 1895; teacher, *ibid.*, 1896-7; student at Comedie Francaise, Paris, 1897; Graduate student, University of Chicago, Summer 1899; pupil of M. J. Brown, S. S. Curry, Otis Skinner, Georges Berr, George Riddle and others; Assistant Professor of Rhetoric and Elocution, West Virginia University, 1898-9; Professor of Rhetoric and Elocution, 1899-1900; Professor of the English Language and Literature, 1900-1901; present position since 1901.

FREDERICK PHILIP RUHL, D.V.S., Professor of Veterinary Science.

D.V.S., American Veterinary College, New York, 1884. Practicing veterinary medicine since 1884; Consulting Veterinarian, West Virginia State Board of Agriculture since 1896; present position since 1899.

FREDERICK WILSON TRUSCOTT, Ph.D., Professor of Germanic Languages and Literatures.

A.B., Indiana University, 1891; A.M., *ibid.*, 1892; A.M., Harvard University, 1894; Ph.D., *ibid.*, 1896. Instructor in German, Indiana University, 1891-3; Assistant in German, Harvard University, 1893-4; Scholar in Modern Languages, *ibid.*, 1894-6; Graduate student, University of Berlin, 1896-8; 1900-1901; Assistant Professor of Germanic Languages and Literatures, West Virginia University, 1897-9; present position since 1899.

JOHN BLACK JOHNSTON, Ph.D., Professor of Biology.

Ph.B., University of Michigan, 1893; Ph.D., *ibid.*, 1899. Graduate student and Assistant in Zoology, *ibid*, 1893-7; Instructor in Zoology, *ibid.*, 1897-9; Assistant Professor of Zoology, 1899-1900; Professor of Zoology, 1900-1901; present position since 1901.

JAMES MADISON BURNS, Major U. S. Army, Professor of Military Science and Tactics, and Commandant of Cadets.

Graduate of Beaver Academy. Entered the Union Army in 1861. Served in the 1st and 2nd West Va. Volunteers until the close of the war. Appointed 2nd Lieut. 17th U. S. Infantry, and served in that regiment until promoted Major in May, 1899. Professor of Military Science and Tactics, and Commandant of Cadets, Ohio State University, 1899-1900; present position since 1900.

*ROBERT ALLEN ARMSTRONG, A.M., Professor of the English Language and Literature.

A.B., West Virginia University, 1886; A.M *ibid.*, 1889. Principal West Liberty State Normal School, 1886-93; Member of bar of Wheeling, West Virginia, 1890; Professor of Mathematics, West Virginia University, 1893-4; Vice President, *ibid.*, 1897-9; Graduate student, University of Chicago, Summer, 1898; Professor of English, West Virginia University, 1894-1899; Student, Columbian University, 1900; present position since 1901.

CHARLES CHOLLET, A.B., Professor of Romance Languages and Literatures.

Eleve de lere, College de Geneve, Switzerland, 1880. A.B., Harvard University, 1887; Instructor in Languages, Mt. Beacon Academy, Fishkill, N. Y., 1888; Professor of French, German and Greek, Louisiana State University, 1888-91; Professor of Latin and Greek, Louisiana State University, 1891-3; Principal of the Poydras Academy, New Roads, La., 1893-7; Graduate student, Columbia University, 1897-1900; Instructor in French, Latin and Greek, Sachs' Collegiate Institute, New York City, 1898-1900; Associate Professor of Romance Languages and Literatures, 1900-1901; present position since 1901.

HENRY SHERWOOD GREEN, LL.D., Professor of the Greek Language and Literature.

A.B., Yale University, 1879. LL.D., Bethany College, 1901. Teacher of Latin and Greek, Hillman Academy, Wilkesbarre, Pa., 1879-1881; Principal, *ibid.*, 1881-86; Teacher in Preparatory School, Richmond, Ky., 1889-1892; Acting Professor of Greek, Central University, Richmond, Ky., 1892-3; Principal of Harrodsburg Academy, Harrodsburg, Ky., 1893-96; Professor of the Greek Language and Literature, Bethany College, Bethany, W. Va., 1896-1900; Associate Professor of the Greek Language and Literature, West Virginia University, 1900-1; present position since 1901.

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*On leave of absence until September 1903 to study in Harvard University.

CLEMENT ROSS JONES, M.M.E., Professor of Mechanical Engineering

B.S.C.E., West Virginia University, 1894; M.E. *ibid.*, 1897; M.M.E. Cornell, 1900. Associate Principal, West Virginia College, 1894; Assistant in Mechanical Engineering, West Virginia University, 1895-7; Instructor, *ibid.* 1897-9; Assistant Professor of Mechanical Engineering 1899-1901; Special Student in shop work, Worcester Polytechnic Institute, Summer, 1896; special student experimental engineering, Stevens Institute of Technology, Summer, 1897; Graduate student, Cornell University, 1899-1900. Member American Society of Mechanical Engineers. Present position since 1901.

RUSSELL McMURPHY, Acting Director of the School of Music, and Instructor on the Piano.

Graduate, New England Conservatory of Music, Boston, 1892; Principal Musical Department, St. Mary's College, Dallas, Texas, 1892-5; Graduate work with Barth in Berlin, 1895-6; Principal Music Department, St. Mary's College, 1896-7; Instructor on the Piano, West Virginia University, 1897-1901; present position since 1901.

LUCY CELESTE DANIELS, Ph.M., Associate Professor of European History.

B.L., University of Wisconsin, 1879; Ph.M. University of Chicago, 1895; Teacher at La Crosse, Wis., 1880-8, and in the Public Schools, Minneapolis, 1888-90; Instructor in English and Latin, Central High School, Minneapolis, 1889-92; and in the Girls High School, Brooklyn, 1892-93; Instructor in History and Latin, Girls Classical School, Indianapolis, 1893-4; Graduate student in Political Science and History, University of Minnesota, 1889-91, and University of Chicago, 1894-5; Instructor in History, Northwest Divison High School, Chicago, 1895-6, and Lewis Institute, Chicago, 1896-9; Lecturer in History, West Virginia University, Summer Quarter, 1899; present position since 1899.

RUSSELL LOVE MORRIS, C. E., Assistant Professor of Civil and Mining Engineering.

B.S.C.E., West Virginia University, 1895; C.E., *ibid.*, 1898. Consulting Engineer, State Board of Agriculture; Chief Draughtsman, West Virginia State Geological and Economic Survey; Assistant in Civil and Mining Engineering, West Virginia University, 1895-7; present position since 1898.

HANNAH BELLE CLARK, Ph.D., Assistant Professor of Sociology, and Dean of Women.

A.B., Smith College, 1887; Ph.D., University of Chicago, 1897; Graduate Student in Sociology, Smith College, 1887-88; Graduate Student in Sociology and Sanitary Science, University of Chicago, 1893-6; Instructor in Dearborn Seminary, Chicago, 1887-93 and 1894-9; Assistant Professor of Domestic Science and Dean of Women, West Virginia University, 1899-1901; present position since 1901.

FREDERICK LAWRENCE KORTRIGHT, D.Sc., Assistant Professor of Chemistry.

B.S., Cornell University, 1890; D.Sc., *ibid.*, 1895. Assistant in Chemistry *ibid.*, 1890-1; Chemist, Solvy Process Company, 1891-2; Assistant in Chemistry, Cornell University, 1892-3; Instructor in Chemistry, *ibid.*, 1893-9; Graduate student, Polytechnicum, Switzerland, 1899-1900; and Technische Hochschule, Carlsruhe, Germany, 1900; Instructor in Chemistry, Cornell University, 1900; present position since 1900.

WILLIAM A. CALDWELL, M.D., Assistant Professor of Anatomy and Physiology.

M.D., Medical Department Columbia University. Student Union College, Eastham Business College, Bellevue Hospital Medical College, New York Post Graduate Medical School, and Columbia University; Professor of Mental and Nervous Diseases in the National Medical College, 1893-99. Member of the Medical Society of the District of Columbia, the Medical Association, and other Medical Societies. Resident physician of Garfield Memorial Hospital, Washington, D. C., and practitioner medicine in that city from graduation until 1899; present position since 1901.

JASPER NEWTON DEAHL, A.M., Assistant Professor of Education.

A.B., University of Nashville, 1889; A. B., Harvard University, 1893; Higher Diploma Teachers' College, Columbia University, 1899; A. M., Columbia University, 1899; Fellow in Education, Teachers' College, Columbia University, 1899-1900; Principal West Liberty State Normal School, 1893-98; present position since 1901.

DENNIS MARTIN WILLIS, LL.B., Instructor in Bookkeeping and Commercial Practice, and Principal of the Commercial School.

L L.B., West Virginia University; Instructor Methodist Conference Seminary, Buckhannon, 1891-2; Instructor, West Virginia Business College, 1892-3; Instructor Northwestern Academy, Clarksburg, 1893-4; Instructor, Central Commercial College, Cumberland, Md., 1894-5; Principal, Western College of Commerce, 1895; present position since 1895.

EVA EMMA HUBBARD, Instructor in Drawing and Painting.

Graduate, Morgantown Female Seminary, 1876; student in Mrs. J. P. Wilkinson's studio, Wheeling, 1881-2; Instructor in Drawing and Painting Wheeling Female College, 1883-4; student in Carl Hecker Art School, New York City, 1884-5; Instructor in Fine Arts, Mountain Lake Park Summer Chautauqua, 1885-8; private studio, Wheeling, 1889-94; Instructor in Drawing and Painting, Mrs. M. Stephen Hart's School for Young Ladies, 1894-7; present position since 1897.

BENJAMIN GRAEFF PRINTZ, Director of the Gymnasium and Instructor in Physical Training.

Student, Hemenway Gymnasium, Harvard University; Director of the Gymnasium and Instructor in Physical Training, Wittenberg College, 1892-8; present position since 1898.

LLOYD LOWNDES FRIEND, A.B., Instructor in English.

A.B., West Virginia University, 1897. Assistant in West Virginia University Preparatory School, Montgomery, 1897-8; Fellow in English, West Virginia University, 1898-9; Assistant in English, *ibid.*, 1899-1900; present position since 1900.

WILLIAM JACKSON LEONARD, Instructor in Fine Arts.

Student, The Cowles Art School, Boston, 1889-90; pupil of Jean Paul Laurens and Benjamin Constant, Paris, 1891-93; student Academie Julien and Ecole des Beaux Arts, Paris; special student Harvard University; Studio and Instructor, Boston, and Hinsdale, N. H.; present position since 1900.

JULIA AILLEEN CLARK, Instructor in Voice.

Student of Singing under Eleanor Smith, Chicago, 1891-5; Assistant Instructor Singing, Hull House, Chicago, 1896-7; Private Teaching, 1897-1900. Student with Mme. Johanna Hess-Burr, Chicago, 1899-1900; studied with J. Armour Galloway, New York, 1900-1901; student of Harmony and History of Music, Columbia University, 1900-1; present position since 1901.

DANIEL WEBSTER OHERN, A.M., Instructor in Greek.

A.B., Drake University, 1898; A. M. West Virginia University, 1899. Fellow in Greek, West Virginia University, 1898-9; Assistant in Greek, 1899-1901; present position since 1901.

KARY CADMUS DAVIS, M.S., Ph.D., Instructor in Botany and Horticulturist of the West Virginia Agricultural Experiment Station.

B.S., Kansas State College, 1891; M.S. *ibid.*, 1894. Advanced Course, Kansas State Normal School, 1892; Principal, State High School, Austin, Minn., 1892-1898; Ph.D. Cornell University, 1900; Professor of Botany, State Normal School, St. Cloud, Minn, 1900-1901; present position since 1901.

ROSS SPENCE, Instructor on Stringed Instruments.

Graduate, University School of Music, Ann Arbor, Michigan, 1897; pupil of Emanuel Wirth, Berlin, 1897-1900; Member Boston Festival Orchestra, 1901; present position since 1901.

GRACE MARTIN SNEE, B.M., Instructor on the Piano and Pipe Organ.

Graduate, Virginia College for Young Ladies, 1893; B.M., *ibid.*, 1894. Instructor in Piano Department, *ibid.*, 1893-4; graduate student, Peabody Institute, Baltimore, 1895-6; Assistant on the Piano, West Virginia University, 1897-1901; present position since 1901.

ELIABETH LEE WHITESCARVER, Assistant in Shorthand and Typewriting.

Student in Commercial School, West Virginia University, 1896-8; present position since 1898.

SIMEON CONANT SMITH, A.B., Assistant in Rhetoric and Elocution.

A.B., Tufts College, 1898; Fellow in Rhetoric and Elocution, West Virginia University, 1899-1900; present position since 1900.

MARTHA BROCK, A.M., Assistant in the English Language and Literature.

Graduate Morgantown Collegiate Institute; Professor of the English and Latin Literatures, Beaver College, Beaver, Pennsylvania, 1879-1892; private school of Literature and History at Morgantown, 1893-1901; present position since 1901.

ALLEN WILSON PORTERFIELD, A.M., Assistant in German.

A.B., West Virginia University, 1899; A.M., *ibid.*, 1901; Instructor in Shepherd College, State Normal School, 1899; Fellow in German, West Virginia University, 1899-1901; present position since 1901.

BERTHA CLELAND BROWNING, A.B., Assistant in the Preparatory School.

A.B., West Virginia University, 1900; present position since 1901.

CHARLES COLLIER HOLDEN, A.B., Assistant in Romance Languages.

Student at University of Virginia, 1877-81; travel and study in Europe, 1881-83; Instructor of Modern Languges, Maupin's University School, Ellicott City, Maryland, 1885-8; A.B., (extra ordinem), Johns Hopkins University, 1888; Graduate student, *ibid.* 1887-8 and 1896-8; Principal of Private School, Raleigh, N. C., 1889-94; Principal of Elkton, Maryland, Academy, 1896-99; Instructor of Modern Languages, Boys' University School of Baltimore, 1899-1900; present position since 1901.

WILLIAM HENRY WHITHAM, A.M., Assistant in Physics and Geology.

B.S., West Virginia University, 1899; A.M., *ibid.*, 1900; A.M., Cornell University, 1901; Fellow in Physics, West Virginia University, 1899-1900; present position since 1901.

ADA VIRGINIA HOUSTON, Assistant on the Piano.

Graduate in Piano, West Virginia University School of Music, 1901; present position since 1901.

CLARENCE POE, A.B., Assistant in History.

A.B., West Virginia University, 1900; Fellow in History, 1899-1900.

THOMAS GETZENDANNER HILL, Instructor on Wind Instruments.

RUFUS A. WEST, Assistant in Metal Working and Stationary Engineer.

Apprentice, Fairchild, Lawhead & Co., Carriage Builders, 1887-90; Blacksmith, Tygart Mfg. Co., 1890-92; special student, Spring Garden Institute, summer 1897; Head Stationary Engineer, National Export Exposition at Philadelphia, fall 1899; present position since 1892.

THOMAS HOWARD CATHER, Foreman of the Machine Shop.

Apprentice B. & O. R. R. Machine shop at Grafton, 1887-91; machinist, B. M. R. R. Co. and Union Pacific R. R., 1891-93; C. R. I. & P. R. R. Co., Horton, Kan., 1893-95; Cotton Belt R. R,, Pine Bluff. Ark., 1895-97; Navy Yard Washington, D. C., 1898; Foreman B. & O. Erecting Shop, Grafton, W. Va., 1899-1902; present position since 1902.

ASHBEL FAIRCHILD, Foreman of Wood shop.

Student, Monongalia Academy 1846-7; Senior partner, Fairchild, Lawhead & Co., Carriage Builders, 1852-90; President and Manager, Tygart Mfg. Co., 1890-98; Member, Board of Education, Morgantown Independent District 1868-77, 1881-95, 1898——; present position since 1901.

LIBRARY STAFF.

ELIZA JANE SKINNER, Librarian.

Student. Zurich, Heidelberg and Paris, 1893-5; Librarian, Matson Public Library, Princeton, Ill., 1896; Library School, Armour Institute of Technology 1896-7; Instructor in Cataloguing, Summer School of Library Science, University of Wisconsin, 1898; Library Director, West Virginia University, 1897-8; present position since 1898.

ANNA BANCROFT WHITE, B.S., Assistant in the Library.

B. S., West Virginia University, 1895. Graduate student, *ibid.*, 1897-8; present position since 1897.

WILLIAM WINFRED SMITH, Assistant in the Library.

Present position since 1899.

ALVAROE GLENN HUGHES, A.B., Assistant in Law Library.

A.B., West Virginia University, 1900.

AGRICULTURAL EXPERIMENT STATION STAFF.

JAMES HENRY STEWART, A.M., Director and Agriculturist.

ANDREW DELMAR HOPKINS, Ph.D., Vice-Director and Entomologist.

BERT HOLMES HITE, M.S., Chemist.

KARY CADMUS DAVIS, M.S., Ph.D., Horticulturist.

WILLIAM EARL RUMSEY, B.S.Agr., Botanist and Assistant Entomologist.

HORACE ATWOOD, M.S., Assistant Agriculturist.

GILBERT M. JOHN, Assistant Horticulturist.

CHARLES DANFORTH HOWARD, B. S., Assistant Chemist.

FRANK BATSON KUNST, Assistant Chemist.
MARTHA ANNE STEWART, Librarian.

OTHER OFFICERS.

WAITMAN BARBE, Registrar.
WILLIAM J. WHITE, Auditor.
ALEXANDER R. WHITEHILL, Treasurer.
JAMES S. STEWART, Secretary to the Board of Regents.
ALBERT JACKSON COLLETT, Secretary to the President.
HENRY ST. CLAIR, Armorer.

WEST VIRGINIA UNIVERSITY.

Organization.

The University organization consists of the following colleges and schools:

I. The College of Arts and Sciences.
II. The College of Engineering and Mechanic Arts.
III. The College of Agriculture.
IV. The College of Law.
V. The School of Music.
VI. The Commercial School.
VII. The Preparatory Schools.
VIII. The School of Fine Arts.
IX. The School of Military Science and Tactics.

Origin and Location.

In 1814 the Legislature of Virginia passed an act incorporating the Monongalia Academy, and locating it at Morgantown. The first building was a one-story brick structure, divided into two rooms. In 1828 this building was sold, and a two-story brick building erected. As a further endowment, the Virginia Legislature passed an act authorizing the trustees of the Academy to raise twenty thousand dollars by lottery, and the drawings for this lottery were conducted January 26, 1832. In later years the Monongalia Academy became an institution of wide reputation, drawing students at one time from fourteen states. For more than fifty years it was the leading school in Virginia west of the mountains.

On July 2, 1862, Congress passed an act donating public lands to the several states to establish "colleges for the benefit of Agriculture and Mechanic Arts." In 1864 this act was extended to the new state of West Virginia, and in 1867 the West Virginia Agricultural College was founded. The trustees of the Monongalia Academy gave to the state all of the real estate and personal effects of the Academy. The building and grounds of Woodburn Seminary, a school for girls in Morgtantown, were also donated, and the new College succeeded the old academy and

seminary, inheriting an honorable record and much good will. The first faculty meeting was held August 20, 1867, and on September 2 of that year the school was formally opened. In 1868 the name of the new institution was changed by an act of the Legislature to the West Virginia University.

Morgantown, the seat of the University, is the county seat of Monongalia county, and is a beautiful town of five thousand inhabitants, on the Monongahela river and the Baltimore and Ohio Railroad, 103 miles east of Wheeling, and the same distance south of Pittsburg. It has the modern conveniences of natural gas, waterworks, electric lights, and local and long distance telephones, and is noted for its healthful conditions, physical, social and moral. There are churches of the following denominations in the town : Presbyterian, Methodist, Episcopal, Methodist Protestant, Baptist, Protestant Episcopal, Lutheran, Christian and Roman Catholic. There are no saloons in Morgantown.

Few insitutions of learning have more attractive natural sites. The University grounds border the Monongahela river, and afford a most picturesque outlook. The campus comprises about twenty-five acres. The University also has a farm of about one hundred acres for the use of the Agricultural Experiment Station and the College of Agriculture.

Funds.

The funds for maintaining the University are derived from the following sources: (1) Interest on the land grant endowment of $114,750; (2) the Morrill fund; (3) the Hatch fund; (4) biennial appropriations by the State Legislature; (5) fees and tuition, the latter being paid only by students from other states.

Buildings.

There are eight brick and stone buildings, as follows:

1. University Hall, a three-story building, containing lecture rooms and the Botanical and Zoological laboratories. A large right wing to this building was recently completed, the third floor of which is occupied by the School of Music.

2. Martin Hall, a three-story building, containing lecture rooms, the Library and society halls.

3. Science Hall, a four-story building, containing lecture rooms, laboratories for the departments of Physics, Chemistry, Geology, rooms for Drawing and Painting, and the museum of Geology and Paleontology, and also the President's office.

4. Commencement Hall, a large two-story building, containing a commodious chapel, with 1,500 seats, and the gymnasium.

5. Agricultural Experiment Station, a two-story building, containing laboratories, lecture rooms and offices.

6. An Armory and Drill Hall for the Military Department.

7. A Mechanical Hall, occupied by the College of Engineering and Mechanic Arts.

8. A Library Building which is now awaiting completion. This building will contain the general library, reading rooms, seminar rooms and the museum.

DEPARTMENTAL EQUIPMENTS.

Anatomy.

The lecture room contains a considerable collection of osteological material, mounted and unmounted, models, etc. The dissecting room has tables for the accommodation of ten students at one time. The Anatomical Law of West Virginia furnishes ample material for practical work and every student is given opportunity for the dissection of the whole body under the personal supervision of the instructor.

Astronomy.

A students' astronomical observatory has recently been erected on the top of the hill in the northeast corner of the Unitversity campus. The dome is thirteen feet in diameter, and is similar in construction to the Hough type. It is equipped with an achromatic telescope of five and one-half inches aperture, and six feet focal length, mounted equatorially on an iron pier, and driven by clock-work mechanism. The telescope is provided with an assortment of eyepieces of hign and low powers, with fittings for different kinds of work. For illustrating the lectures, a carefully selected assortment of lantern slides, drawings, maps, diagrams and models, has been obtained, and this is supplemented by apparatus lent by other departments. The library contains the principal hand books and treaties in each section of descriptive and mathematical astronomy, together with the publications of the U. S. Government, the files of "Popular Astronomy" and the Astrophysical Journal, and the bulletins from Harvard, Lick and Yerkes observatories.

Botany.

The Botanical Laboratory is equipped with 13 good Bausch and Lomb microscopes; hand lenses; microtome; standard stains and chemicals, and apparatus; special physiological apparatus including centrifugal machine, clinostat, anxanometer, devices for the automatic registration of transpiration and photosynthesis, and complete apparatus for the study of respiration; dark room; projection apparatus; and a large collection of alcoholic histological material. The Department of Botany

has always been granted any needed use of the green-houses of the Experiment Station.

Chemistry.

The rooms assigned to this department are located on the second floor of Science Hall, and consist of a lecture room and two large laboratories. Connected with these are a dark room, a weighing room, and a preparation room. The laboratories afford working space for sixty-five students at a time, and are abundantly supplied with water and gas and the chemicals and apparatus necessary for practical work. This apparatus includes a large number of pieces used in illustrating the elementary principles of the science, as well as many of the more expensive instruments used in analytical work. An excellent collection of the latest text and reference books is kept within easy reach of the students, and the aim has been to make the laboratory outfit as complete and ample as possible.

Civil Engineering.

The material equipment of this department consists of the civil engineering laboratory, equipped with a collection of apparatus and instruments for instruction in engineering believed to be complete and modern, consisting of transits, levels, theodolites, surveyors' compasses, aneroid barometers, plane table, solar compass, sextant clinometers, odometer, pendometers, telemeters, prismatic compass, hand levels, a full collection of drawing instruments, blue printing outfit, complete set of United States standard weights and measures, testing machines for testing strength of materials, as wood, iron, steel, stone, cement, mortar, etc.; a drawing room containing a large number of descriptive geometry models, and models of bridges, furnaces and many other structures, and a large number of wood and plaster casts and models pertaining to descriptive geometry, architecture, etc. The equipment of the Department of Physics, described below, is of great value to students in the Engineering courses.

Commercial School.

The Commercial School has recently been fitted out with modern commercial school furniture, including three banking counters and office desks, and an equipment for the most extensive business practice. Ten new Smith Premier typewriters have been added to the Typewriting Department for the use of students.

Entomology.

The equipment of the Entomological Department consists of a col-

lection of over 20,000 specimens and over 7,000 separate notes on original observations taken in West Virginia by the Entomologist. The apparatus for collecting, breeding, mounting, preserving and studying specimens is complete. The microscopic outfit is sufficient for carrying on any class of study in this line. The photographic department is thoroughly equipped for the requirements of entomological and other work.

Geology.

The equipment for purposes of illustrative teaching in this subject consists of many thousands of fossils, casts and models, a good collection of minerals, specimens of all of the important building stones, and Ward's College Collection in Palaeontology, showing the advancement from the early forms of life to those of the present time. The University is situated in the midst of a great coal producing region, within five miles of the western fold of the Appalachian mountains, and oil and gas wells are but a short distance away. The natural facilities, therefore, for the study of Geology are unsurpassed.

Gymnasium.

The gymnasium includes all of the first story of Commencement Hall, and is well furnished with Indian clubs, dumb-bells, wands, vaulting, horizontal, traveling and parallel bars; finger, wrist and hand machines; flying rings, chest and intercostal machines, quarter circle, adjustable ladder, climbing ladder, plain rope trapeze, traveling rings, striking bags and drum, boxing gloves, hammer and shot, heavy bells, medicine ball, lockers, large plunge bath and shower baths, horse, batteau boards, jumping standards, stands, and basket ball outfit.

Young women have the same advantages in the Gymnasium as young men, certain hours being reserved and regular classes formed for them.

Mechanical Engineering.

Practical instruction in Mechanical Engineering and the Mechanic Arts and in Electrical Engineering is provided for in the equipment of Mechanical Hall. Standard measures and calculating instruments, laboratory appliances and apparatus are provided for qualitative and quantitative experimental work in engineering.

The electric light and power plant of the University is located in the Mechanical Hall. The boilers, triple-expansion engines, condensers, and electrical machinery, as well as the motive-power machinery of the shop, have been especially selected and arranged for experimental work in Mchanical and Electrical Engineering. In the drawing room,

models of the typical valve-gears are used for instruction. Samples of raw materials and of manufactured products are collected, forming the nucleus of an engineering museum. Such machine tools and workshop appliances for working wood and metal, as well as small tools, stock and material, are supplied as will enable the work of instruction to be carried on efficiently in the Mechanic Arts.

Physics.

The department of Physics has its lecture room and laboratories in Science Hall. A large room on the basement floor of this building has been fitted up as a laboratory and equipped with apparatus for individual experimental work. Work of this character is required of students in every regular course given in the department.

The apparatus for electrical measurements and test work is especially well selected and of superior quality. Students in electrical subjects have opportunity to become familiar with the use of the latest and most improved forms of apparatus for measurement of current, resistance, electromotive force, quantity, capacity, induction, etc.

The lecture table equipment is also quite extensive. The laboratory is open for the use of students every afternoon except Saturday. All laboratory work is under the personal supervision of the instuctor.

Zoology.

The Zoological Laboratory comprises two laboratory rooms and a small rooom for mammals. The laboratory rooms have about 1600 feet of floor space, are lighted by north windows, and are furnished with ebonized oak tables, dust proof cases for apparatus, and ample shelves and drawers. The rooms are provided with gas on all the tables, Welsbach and electric lights and with a plentiful supply of water. The laboratory will accommodate thirty-two students at one time.

There is a good equipment of microscopes, including a large Zeiss microscope fitted with apochromatic objectives and compensating eyepieces, dissecting microscopes, a Minot-Zimmerman microtome, a parraffin bath of special design accommodating twenty-two workers, incubator, water-still, and the usual minor apparatus, glassware, and reagents for class work and investigation. There is a set of Ziegler's wax models of the chick and a number of Auzoux models, including the large model of the human brain. There is a large collection of fishes and amphibia, and a constantly increasing number of anatomical and embryological preparations.

The surrounding country offers unusual opportunities for the study of amphibia and the laboratory is well provided with the means for studying the living animals and their development, there being an open air aquarium twenty-three feet long, and indoors one three and a half feet long and twelve of smaller size for frogs, turtles, etc., and provision is made for maintaining sixteen small aquaria and hatching jars with running water.

For lecture purposes there is a Colt projection lantern and a good collection of lantern slides.

The library contains recent important books of reference, a few monographs of special groups, full files of several, and the current issues of a large number, of the more important morphological and physiological journals.

GENERAL INFORMATION.

Christian Associations.

The Young Men's Christian Association of the West Virginia University was organized for the purpose of encouraging active Christian work among its own members, and of promoting the spiritual growth of all the young men of the University.

Regular meetings are held every Friday evening at 6:15 in the Association room. All young men of the University who are members of Evangelical Churches are eligible to active membership in the Association; and young men who are not connected with any church may become associate members. A four years' course of Bible study is maintained by the Association. Delegates are sent each year to the various student conventions.

An Advisory Board chosen by the Association and composed of members of the Faculty, prominent business men of the town, and students, has general control of the affairs of the Association.

The Young Women's Christian Association was organized April 19, 1900. Membership is open to young women of the University on the same terms as those stated above for the Y. M. C. A. Regular devotional meetings are held every Friday at 4 P. M. in Columbian Hall.

The Central Oratorical League.

This organization at present consists of the Ohio Wesleyan University, Ohio State University, the University of Indiana, Cornell University, the University of Illinois, and the West Virginia University. The object of this League is to maintain a high standard of oratory among college students and to foster an interest in public speaking by holding contests in oratory at such times and places as shall be decided upon by a two-thirds vote at the annual business meeting of the League. The annual contest of the League is held the third Friday in May.

At a final contest held on the first Friday evening in February, the student who wins first honors is chosen to represent the University in the annual contest of the League. For regulations governing the prelim-

mary contests and for further information students are referred to the Committee on Ways and Means.

Other Societies.

1. The Columbian Literary Society. Regular meetings every Friday night in its own hall in Martin Hall. Membership open to all students of the University.

2. The Parthenon Literary Society. Regular meetings every Friday night in its own hall in Martin Hall. Membership open to all students of the University.

3. The Engineering Society. Regular meetings the first and third Friday nights of each month in room 14, Science Hall. Membership open to all students in the College of Engineering and Mechanic Arts.

4. The Aurora Grange, number 372, Patrons of Husbandry. Regular meetings every Tuesday night in the lecture room of the Experiment Station. Membership open to all students in the College of Agriculture and others who may be elected.

5. The Debating Club. Regular meetings at 7:30 every Saturday evening in room 11, University Hall. Its purpose is the logical discussion of political and economic questions. Membership open to all students of the University.

6. The Choral Society. Regular meetings every Tuesday at 7:30 P. M. in Commencement Hall. Membership open to all students in the School of Music and all others interested.

7. The Athletic Association. Organized for the purpose of encouraging and developing the athletic interests of the University. Incorporated under the laws of West Virginia. Membership open to all students of the University.

Prizes.

All contestants in any of the oratorical contests of the University must have received credit for at least one course in Elocution.

No composition, in whole or in part, shall be submitted in competition for two prizes.

Only undergraduate students are eligible for any prize offered.

No student shall be eligible to enter any contest who has not been a resident student in this University for at least one quarter preceding the quarter in which the contest is to be held, and who is not a resident student in good standing in the University in the quarter in which the contest is held.

No successful contestant may become a second time a competitor for the same prize.

The conditions upon which the awards in the several contests are made may be learned upon application at the President's office or to the members of the Committee on Ways and Means.

The following prizes are open to students in various departments of the University.

I. The Wiles Prizes in Oratory.

Mr. John W. Wiles, A. B., of the class of 1894, a citizen of Morgantown, has offered the following prizes to be awarded each year for excellence in original oratory:

(a) A cash prize of one hundred dollars to the competitor who is adjudged best in original oratory;

(b) A gold medal to the competitor who is adjudged second best in original oratory.

II. The Scott Prize in Declamation.

A prize of one hundred dollars will be awarded each year by Hon. N. B. Scott, United States Senator from West Virginia, to the woman student in any department of the University who excels in declamation.

III. The Inter-Society Prizes.

Prizes aggregating one hundred and fifteen dollars are awarded annually by the Board of Regents of the University to the literary society whose representatives excel in declamation, original oratory, essay writing, and debate.

IV. The Regents' Prize in Composition.

A prize of twenty-five dollars is awarded annually by the Board of Regents of the University to the student in any of the regular college courses who shall write the best essay on a topic selected by the Committee on Ways and Means.

V. The Elkins Prizes in Greek.

A prize of sixty dollars to the student who makes the highest average grade in the first college year's work in Greek, and a prize of forty dollars to the student who makes the next highest grade in the same work, have been offered by Hon. Stephen B. Elkins, United States Senator from West Virginia.

VI. The Jas. F. Thompson Prize in Anatomy.

A prize of twenty-five dollars, the gift of Mr. Jas. F. Thompson, of Martinsburg, W. Va., will be awarded annually to the undergraduate student who does the best work in Anatomy for three quarters. The decision will be announced at Commencement.

VII. The Regents' Prizes in Declamation.

The Board of Regents of the University annually awards to the student in the Preparatory School who excels in declamation, a prize of fifteen dollars, and prizes of ten dollars and five dollars respectively to the contestants who rank second and third.

VIII. The Edward Thompson Company Prize.

The Edward Thompson Company offers for the year 1902-03, to the student in the senior law class who shall write the best essay on some subject in law to be selected by the Faculty of the Law School, a prize consisting of a set of the Encyclopedia of Pleading and Practice in twenty-three volumes.

IX. The Bryan Prize in Political Science.

The Hon. William J. Bryan has given a sum of money, the annual income of which is to be offered as a prize to that student in the University who shall write the best essay on some subject in the Science of Government. The amount of the prize for the present is fifteen dollars.

Theses.

If a thesis is required by the class officer of a candidate for the bachelor's degree, the student will observe the following regulations:

Theses must be typewritten with black non-copying record ink on Crane's Japanese linen paper, of quality 24 pounds to the ream, folio size. This paper, of right quality and correct size, viz., 8x10 inches, may be obtained at the University book room, or at any bookstore in Morgantown. A margin of one and one-fourth inches must be left at the left edge of each sheet, and a margin of three-fourths of an inch on the other edges. The title page should follow, mutatis mutandis, the sample title page on the bulletin board in the Library.

When the thesis is typewrittten and ready for binding, the student will secure the written approval of the professor under whose direction the thesis has been prepared and the Librarian's receipt for the thesis fee. The thesis will then be presented to the Committee on Classification and Grades. The thesis must be in the hands of this committee at least thirty days before the date on which the degree is to be conferred.

The Committee on Classification and Grades will not receive a thesis from any student until he has received credit for thirty-four college courses.

Discipline.

The rules and regulations which students are required to observe

are few, simple and reasonable,—punctuality and regularity in attendance upon all required exercises; reasonable diligence in the performance of the work prescribed; abstinence from drinking, gambling and like gross vices; and civil, orderly conduct generally.

Students who cannot, or will not, comply with these requirements will not be allowed to remain in the University.

All matters of discipline are in charge of the University Council.

Chapel Exercises.

The regular University work of each day of the week, except Saturday, begins with Chapel exercises. These exercises consist of singing, reading the Scriptures, and prayer. The service is conducted by the Chaplain of the University, or by some one designated by him. The singing is in charge of the Director of the School of Music. In addition to these exercises, the Chaplain delivers a course of lectures each quarter on such subjects as the origin, structure, literature, history, languages, versions, institutions, personages, influences, etc., of the Bible. Students who enroll for these courses and comply with such requirements as may be prescribed by the Chaplain, are given credit for one-third of a course for each quarter. Appropriate text-books are used in addition to the lectures.

Attendance upon Chapel exercises is voluntary; but patrons of the University who wish the students under their charge to attend these exercises may have them enrolled by making such desire known to the University Chaplain.

Church Halls.

Several religious denominations have manifested an active interest in establishing church halls in Morgantown for the purpose of providing homes for students during their stay in the University.

The Episcopal Hall was established in 1895 by the Rt. Rev. George W. Peterkin, Bishop of West Virginia, to provide a home for young men studying for the ministry under his direction, and for any other students of the University who may choose to reside there. He did this in preference to establishing a separate church college, which would have necessitated the duplication of the plant already established at the University. The Hall is a comfortable, home-like building of forty rooms, heated by steam and lighted by electricity, under the care of a proctor, who resides in the Hall. The primary object of the Hall is to secure for the student not only the attractive corporate side of college dormitory life, but also some of the comforts of home life.

The charge for board and room per week is $3.50. A student may obtain the right to room alone by paying $3.75 per week.

Athletics.

Besides the regular military drill, physical training exercises and gymnasium instruction, sufficient attention is given to field sports, such as foot-ball, base-ball, track contests, tennis, etc. The athletic ground, adjoining Commencement Hall, is well adapted to out-of-door sports.

Through the generosity of the Hon. George C. Sturgiss the athletic field has been provided with a grand stand, at a cost of one thousand dollars, which will add greatly to the enjoyment of athletic sports and their profit to University life.

All field sports are under the control of the Faculty Committee on Athletics.

Students who represent the University in intercollegiate athletic contests are required to conform to certain rules, of which the following are of general interest:

Rule I. No student shall be allowed to participate in any intercollegiate game during the first quarter of his residence at the University; but this shall not apply to any college student who enters a course leading to a degree and takes the required work of that course.

Rule II. No student shall be allowed to participate in any intercollegiate game, who has failed to make an average standing of at least 75 per cent. during his last quarter's residence at the University.

Rule III. At least two weeks before any game is to be played the manager of the team to play shall submit to the Athletic Committee a list of the candidates from whom the team is selected; and no person whose name has not been so submitted shall, under any circumstances, play in any game.

University Fees.

Except in the School of Music and in the Department of Fine Arts, tuition is free to West Virginia students.

The tuition charged students from other states is:

$5.00 per quarter in the Preparatory School.

$5.00 per quarter in the Commercial School.

$8.00 per quarter in the College of Law.

$12.50 per quarter in the other colleges.

The matriculation fee is $5.00, payable upon entering the University by all students except cadets and those whose work is exclusively in Music or Art. Unless a student remains out of the University more than three years, the matriculation fee is paid but once by each student.

The contingent fee is $2.50 per quarter, payable at the beginning of

the quarter by all students except cadets and those whose work is exclusively in Music or Art.

A fee of $2.00 each term is charged for registration or for the procurement of class cards. This fee is remitted to all students who register or procure class cards during the first three days of the fall quarter, and on the first day of the winter quarter, and the first day of the spring quarter; and is exacted in all other cases whatsoever.

The diploma fee is $5.00, payable upon graduation by all students. This fee is to cover the cost of the diploma.

Students in laboratory courses pay the following fees, to cover the cost of material used:

$2.00 per quarter in General Chemistry.
$6.50 per quarter in Analytical Chemistry.
$5.00 per quarter in Anatomy.
$2.00 per quarter in Botany.
$2.00 per quarter in Elementary Zoology.
$3.00 to $5.00 per quarter in advanced courses in Zoology.
$2.00 per quarter in Mineralogy.
$1.00 per quarter in Typewriting.

The School of Music and the School of Fine Arts are partly supported by the special fees charged. These fees, which are moderate, are stated in connection with the announcements of these departments.

Board and Lodging.

Board and lodging together may be obtained in Morgantown for $3.00 per week. Most students, however, pay from $3.25 to $3.50 per week. Furnished rooms may be obtained in private families at from $1.00 to $1.25 per week. Board in students' clubs costs from $2.00 to $2.50 per week; in private families, from $2.50 to $3.00.

Estimated Expenses for a Year of Nine Months.

Room Rent	$36.00	to	$ 45.00
Board	72.00	to	108.00
Washing	9.00	to	13.00
Text-books	8.00	to	30.00
Contingent fees	7.50	to	7.50
	$132.50		$203.50

To this estimate must be added matriculation and tuition fees, in the case of students who are required to pay them, and also traveling expenses, clothing, and miscellaneous expenses, which depend largely upon the tastes and habits of individual students.

Text-books are kept for sale in the University book room, and are furnished to students at cost.

State cadets are furnished their text-books, stationery and uniforms free, and are exempt from the payment of matriculation and contingent fees.

Aid for Students.

The Committee on Students' Aid undertakes to assist earnest and worthy students, who are dependent upon their own efforts for their education, to obtain various forms of employment in Morgantown, which may not interfere with their studies and will help to defray their expenses.

This committee also has charge of all requests which come to the University for students to fill various positions. Calls of this kind, especially upon the Engineering Department, are frequent.

The establishment of a fund is contemplated which, under proper conditions, will be loaned to students who would otherwise be unable to complete their course. Contributions to this fund, which will be under the direction of a board of trustees, are solicited. Communications in regard to contributions should be directed to the President.

Students whose means are insufficient to enable them to attend the University, are requested to address the secretary of the committee on Students' Aid, Mr. Ross Spence, stating their condition and the kinds of work they are best capable of doing. Such communications will receive immediate attention.

Approved Boarding and Rooming Places.

A committee of the Faculty has general oversight of the question of boarding and rooming, and will not only help the students to find desirable places, but will see that no student rooms or boards at an objectionable place. At present the Committee on Boarding and Rooming places consists of Mr. Friend, Mr. Ohern, Mr. Porterfield, Miss Whitescarver, and Mr. Whitham.

Students in search of rooms or boarding places and proprietors of lodging or boarding houses are requested to confer with the members of this committee, who will prepare and publish regularly a list of approved boarding and rooming places for students.

Committees from the Y. M. C. A. and Y. W. C. A. meet new students at trains and render them every assistance possible in getting settled in Morgantown.

Teachers' Bureau of Information.

The Teacher's Bureau of Information, under the direction of the Department of Pedagogy, has for its aim:—

1. To keep a record of the graduates of the University who wish to teach, to gather information as to their academic and professional qualifications and personal fitness for school work, and to recommend for vacancies those who seem most likely to prove themselves efficient.

2. To keep a similar record of alumni who wish to be transferred to other positions.

3. To assist boards of education and other school officials in securing teachers and to cooperate with teacher's agencies in placing graduates of the University.

No position is assured any student. General letters of recommendation are not given to students. Information obtained from professors and others is regarded as confidential. No charge is made for any services rendered. Blanks for registration will be funished on application. The following is the committee on recommendation: Dr. D. B. Purinton, T. E. Hodges, J. N. Deahl, Sec.

Accredited Preparatory Schools.

The University is a part of the Public School System of the State, and desires that its relations with the other parts of the system be as close and intimate as possible. The Faculty Committee on Classification and Grades has full charge of all matters pertaining to accredited schools. This Committee consists of Professors Hodges, Barbe, Truscott, Deahl, and Jones. School superintendents, principals, or boards, desiring to have their schools placed on the accredited list, should make application to Professor J. N. Deahl, sub-committee on Accredited Schools. The placing of a school on its accredited list does not mean that its graduates will be admitted to the University, but only that they will be given credit for such preparatory courses as they have completed. Diplomas or certificates of a general nature will not be accepted, but certificates setting forth the work of the student in detail will be required in every case. The University provides a special form for this certificate, copies of which may be obtained at any time upon application to the President of the University or Chairman of the Committee on Classification and Grades. A supply should be kept constantly on hand by the Principal of each accredited school.

The list of accredited schools at present is as follows:

Allegheny Collegiate Institute.....Alderson, W. Va.
Barboursville College.....Barboursville, W. Va.

Berkeley Military Academy.....Martinsburg, W. Va
Bloomsburg State Normal School.....Bloomsburg, Pa.
Broaddus Classical Institute.....Clarksburg, W. Va.
Charleston High School.....Charleston, W. Va.
Charles Town High School .....Charles Town, W. Va.
Clarksburg High School .....Clarksburg, W. Va.
Connellsville High School.....Connellsville, Pa.
Ceredo High School.....Ceredo, W. Va.
Davis Free School.....Piedmont, W. Va.
Fairmont High School.....Fairmont, W. Va.
Grafton High School.....Grafton, W. Va.
Greensburg High School.....Greensburg, Pa.
Huntington High School.....Huntington, W. Va.
Hinton High School .....Hinton, W. Va.
Leechburg High School.....Leechburg, Pa.
Martinsburg High School.....Martinsburg, W. Va.
Morgantown High School.....Morgantown, W. Va.
Moundsville High School.....Moundsville, W. Va.
Mt. Wesley High School .....Berkeley Springs, W. Va.
New Cumberland High School.....New Cumberland, W. Va.
New Martinsville High School.....New Martinsville, W. Va.
Parkersburg High School.....Parkersburg, W. Va.
Pittsburg Central High School.....Pittsburg, Pa.
Pittsburg Academy.....Pittsburg, Pa.
Point Pleasant High School.....Point Pleasant, W. Va.
Potomac Academy.....Romney, W. Va.
Ravenswood High School.....Ravenswood, W. Va.
Salem College .....Salem, W. Va.
State Normal School .....Athens, W. Va.
State Normal School.....Fairmont, W. Va.
State Normal School.....Glenville, W. Va.
State Normal School.....Huntington, W. Va.
State Normal School.....Shepherdstown, W. Va.
State Normal School.....West Liberty, W. Va.
Southwestern State Normal School.....California Pa.
Scottdale High School.....Scottdale, Pa.
Steubenville High School.....Steubenville, Ohio.
Uniontown High School.....Uniontown, Pa.
West Virginia Conference Seminary.....Buckhannon, W. Va.
Western Pa. Classical and Scientific Institute.....Mt. Pleasant, Pa.
Wellsburg High School.....Wellsburg, W. Va.
Wheeling High School.....Wheeling, W. Va.

Matriculation and Registration.

Before being admitted to any class, students matriculate at the President's office, room 10, Science Hall. All students are required to register once every year.

THE UNIVERSITY LIBRARY.

Library Staff.

ELIZA JANE SKINNER, Librarian.
ANNA BANCROFT WHITE, A. B., Assistant.
WILLIAM WINFRED SMITH, Assistant,
ALVAROE GLENN HUGHES, A. B., Assistant in Law Library.

Library and Reading Room.

The Library is open from 8 A. M. to 10 P. M., every day except Sunday and the legal holidays,—Fourth of July, Thanksgiving Day, Christmas Day and New Year's Day. On Sunday the Library is open for reading and the consultation of books from 2 P. M. to 5 P. M. No books are given out on Sunday.

All officers and students in all departments of the University have free access to the Library, and may draw books for home use. Two volumes may be taken out at a time and retained for two weeks. Upon request of instructors, books used as collateral reading in University courses are reserved for use in the Library.

Students have free access to the shelves, and are urged to avail themselves of the opportunity thus offered to become familiar with the standard works in each department of learning.

The Library may be consulted by all persons, whether connected with the University or not, and, under special regulations, the privilege of borowing books is extended to those not connected with the University.

The Library contains about 20.000 volumes, exclusive of unbound pamphlets and duplicates. This includes both the main library and the library of the Law Department which contains about 1600 volumes, and is shelved in University Hall, in rooms adjoining the Law Department lecture rooms.

Present appropriations provide for the addition of about 1300 volumes annually.

Bibliographic aids have been added and the attendants in charge are ready at all times to give assistance in research and investigation. The value to the University student of a knowledge of the proper use

of books is inestimable. It is the aim to develop this line of instruction, and to make the Library the attractive working center of the University.

The reading room occupies a part of the room devoted to the Library, and is provided with the current newspapers and periodicals, both general and technical. The periodical list includes about one hundred and fifty of the best magazines and papers, and the leading county papers of the State. The room is well lighted, and is free to all who care to use it.

A handsome new stone Library building is being erected and will soon be ready for use. It will supply one of the University's greatest needs.

A gift of great interest was received during the past year when the private library of the late Senator W. T. Willey, containing about 3000 volumes, was donated to the University by the heirs as a memorial library. The transfer of this collection to the library will be made as soon as the new building is finished.

THE COLLEGE OF ARTS AND SCIENCES.

Staff of Instruction.

DANIEL BOARDMAN PURINTON, President and Professor of Philosophy.

POWELL BENTON REYNOLDS, D.D., Chaplain, and Professor of Economics and Sociology.

WAITMAN BARBE, A. M., Assistant to the President, Associate Professor of the English Language and Literature, and Field Agent.

ALEXANDER REID WHITEHILL, Ph. D., Professor of Chemistry.

SAMUEL B. BROWN, A. M., Professor of Geology and Mineralogy.

JAMES SCOTT STEWART, M. S., Professor of Mathematics.

ROBERT WILLIAM DOUTHAT, Ph. D., Professor of the Latin Language and Literature.

THOMAS EDWARD HODGES, A. M., Professor of Physics.

RICHARD ELLSWORTH FAST, LL. B., Ph. B., Professor of American History and Political Science.

FREDERICK WILLIAM TRUSCOTT, Ph. D., Professor of Germanic Languages and Literatures.

CHARLES HENRY PATTERSON, A.M., Professor of Rhetoric and Elocution and Acting Head of the Department of English.

JOHN BLACK JOHNSTON, Ph. D., Professor of Biology.

JAMES MADISON BURNS, U. S. A., Professor of Military Science and Tactics and Commandant of Cadets.

ROBERT ALLEN ARMSTRONG, A.M., Professor of the English Language and Literature.

CHARLES CHOLLET, A. M., Professor of Romance Languages and Literatures.

HENRY SHERWOOD GREEN, A.M., Professor of the Greek Language and Literature.

LUCY CELESTE DANIELS, Ph. M., Associate Professor of European History.

HANNAH BELLE CLARK, Ph. D., Assistant Professor of Sociology, and Dean of Women.

FREDERICK LAWRENCE KORTRIGHT, Ph.D., Assistant Professor of Chemistry.

WILLIAM A. CALDWELL, M. D., Assistant Professor of Anatomy and Physiology.

JASPER NEWTON DEAHL, A. M., Assistant Professor of Education.

EVA EMMA HUBBARD, Instructor in Drawing and Painting.

BENJAMIN GRAEFF PRINTZ, Director of the Gymnasium and Instructor in Physical Training.

WILLIAM JACKSON LEONARD, Instructor in Fine Arts.

DANIEL WEBSTER OHERN, A. M., Instructor in Greek.

KARY CADMUS DAVIS, M. S., Ph. D., Instructor in Botany.

SIMEON CONANT SMITH, A. B., Assistant in Rhetoric and Elocution.

MARTHA BROCK, A. M., Assistant in the English Language and Literature.

ALLEN WILSON PORTERFIELD, A. M., Assistant in German.

CHARLES COLLIER HOLDEN, A. B., Assistant in Romance Languages

WILLIAM HENRY WHITHAM, A. M., Assistant in Physics and Geology.

CLARENCE POE, A. B., Assistant in History.

ADMISSION.

After September 1, 1903, the requirements for admission will be as follows:

Subjects.	Number of Courses Prescribed.	Maximum Allowed.	Minimum Electives Allowed.
English,	9	9	0
Latin	6	9	1
Greek,	0	6	3
French,	0	3	3
German,	0	3	3
Algebra and Geometry,	6	7	1
Botany or Zoology,	0	3	1
Physics,	0	2	1
Physiology,	0	1	1
Physical Geography,	0	1	1
Chemistry	0	3	2
Drawing,	0	3	1
History,	2	6	1
Total,	23	56	19

Twenty-three courses prescribed; thirteen courses elective; thirty-six courses required.

A course represents the amount of work ordinarily done by a class meeting five times a week for one quarter (twelve weeks) in recitations of from 45 minutes to one hour's length.

A knowledge of Arithmetic, Elementary English, Geography and Civil Government is presupposed.

From one to three courses credit for Military service rendered while in the University Preparatory School will be allowed.

From one to four courses credit for Chapel lectures taken while in the University Preparatory School will be allowed.

English.

The work in English should cover three years, if five periods per week of one hour each can be devoted to it. If fewer or shorter recitation periods are necessary, it should extend over four years. This work should include a study of Grammar, Composition, Rhetoric and Literature.

Grammar and Composition.—The aim of the instructor in teaching Grammar should be to lead the student to a correct use of grammatical forms in speaking and writing, rather than to a mere knowledge of the definitions and rules of technical grammar. Words should be studied in their relation to one another in the sentence, and sentences should be considered as related parts of the paragraph. Constant use should be made of selections from the best modern writers that the student may come in contact with good English as it is used rather than as dissected by grammarians. Frequent exercises in oral and written composition should be required. The written work should afford careful drill in spelling, capitalization, and punctuation. In the external form of the composition, the heading, margin, and indentation of paragraphs should receive attention. Any good text book can be used as a basis for this work.

Rhetoric and Composition.—The work in rhetoric should include a study of the sentence, the paragraph and the theme, with special attention to unity, coherence and emphasis, and of diction and the figures of speech. Selections from the best authors should provide the student with illustrative examples in this work also, and frequent written exercises should be required. Subjects for compositions should be within the range of the student and of such nature as to arouse his interest. This work should afford a drill in narration, description, and exposition.

Literature.—The study of literature should go hand in hand with the study of composition; one should strengthen and supplement the other. In the study of a production, three things should receive special attention—the meaning of the author, the method of the author, and the style of the author. The student should be required to prepare oral or written reports on books selected for reading.

American Literature.—In American literature at least one (more if possible) representative production should be read from Franklin, Irving, Cooper, Bryant, Hawthorne, Lowell, Longfellow, Whittier, Poe, Thoreau, Emerson, Parkman, Stowe, Wallace, Dana, Burroughs, Stephens, Warner and Hale.

Close study should be made of Bryant's Thanatopsis, Emerson's American Scholar, Whittier's Snow Bound, and Lowell's Vision of Sir Launfal.

English Literature.—In English literature one or more productions should be read from Shakespeare, Milton, Goldsmith, Dryden, Pope (Translation of the Iliad, books I., VI., XXII., and XXIV.), Lamb (Tales from Shakespeare), Thackeray, Carlyle, Macaulay, Scott, Kingsley, Coleridge, Wordsworth, Dickens, George Eliot, Blackmore, Hughes and Tennyson.

Close study should be made of Shakespeare's Macbeth and Merchant of Venice, Burke's Speech on Conciliation with America, Milton's L'Allegro, Il Penseroso, Comus, and Lycidas, Macaulay's Essay on Milton and Addison, and The Sir Roger De Coverley Papers from the Spectator.

Latin.

To entitle a student to credit for the six required courses of preparatory Latin he should have a thorough mastery of some good first year Latin book, such as Chase and Stuart's First Year in Latin, or Bennett's Foundations of Latin.

He should also have read and parsed, in addition to the above, four books of Caesar's Gallic War and three orations of Cicero.

If he desires credit for the maximum number of courses of preparatory Latin (9), he should have read and parsed, in addition to the above, two other of Cicero's Orations and six books of the Aeneid of Virgil, should have had one year of preparatory Latin composition, such as Collar and Moulton's Preparatory Latin Composition, and should be able to read metrically Heroic Hexameter verse.

Greek.

The six courses of preparatory Greek are as follows:

The completion of some good text-book in beginning Greek, such

as White's First Greek Book, (two courses), the reading of the first four books of Xenophon's Anabasis, together with prose composition (two courses), a quarter's work in Lysias's Orations; or an equivalent (one course), and Homer's Iliad, books I., II., and III., (one course).

French.

To entitle a student to credit for three courses in French he should have a fair knowledge of the morphology and syntax of the parts of speech in modern French, together with a vocabulary sufficient to enable him to write in French sentences of moderate difficulty, embodying the leading principles of our grammar. He should have read at least 200 pages of modern prose. It ought specially to be borne in mind that the training of the ear in the understanding of spoken French and the training of the organs of speech in accurate pronunciation should keep pace with practice in written and oral translation.

German.

The following is a general outline of the work that will entitle an applicant to credit for three courses of German:

1. A thorough knowledge of elementary syntax.
2. Constant drill in pronunciation and oral translation.
3. Composition—thirty to forty pages.
4. Translation—three hundred and fifty to four hundred pages.

Mathematics.

The six prescribed courses in mathematics required for entrance into the College of Arts and Sciences may be made up of three courses in Algebra, two courses in Plane Geometry and one course in solid Geometry, or four courses in Algebra and two courses in Plane Geometry. The maximum number of courses in mathematics which any student may offer for entrance into the College of Arts and Sciences is seven, four courses credit being allowed in Algebra, two courses in Plane Geometry and one course in Solid Geometry.

1. Elementary Algebra—3 courses credit. Includes the four fundamental operations for rational algebraic expressions, factoring, highest common divisor, least common multiple, complex fractions, the solution of equations of the first degree containing one or more unknown quantities, radical and fractional exponents, and quadratic equations in one and two unknown quantities; as much as is contained in Milne's Academic, Ray's Higher or Well's University Algebra on these subjects. The student should be able to perform all these operations with rapid-

ity and accuracy and to solve practical problems readily and completely.

2. Advanced Algebra.—1 additional course credit. Includes, in addition to the above, ratio and proportion, the progressions, the elementary treatment of permutations and combinations, the binomial theorum for positive integral exponents and the use of logarithms; as much as is contained in Milne's Academic, Ray's Higher Algebra or the larger American and English text-books, or Wells' University Algebra to logarithms.

3. Plane Geometry—2 courses credit. Includes the solution of simple original exercises and numerical problems; as much as is contained in Well's, Wentworth's or Stewart's Geometries, or text-book of like grade. The student should be able to apply the principles of Geometry to practical and numerical examples.

4. Solid Geometry—1 course credit. Includes the properties of straight lines and planes, of diedral and polyhedral angles, or projections, of polyhedrons, including prisms, pyramids and the regular solids, of cylinders, cones and spheres, of spherical triangles and the measurement of surfaces and solids; as much as is contained in the text-books named above or other standard works of equal grade.

Zoology and Botany.

Work in either of these subjects in order to be credited must have been accompanied by laboratory work. The exact extent of the work which should be done cannot be stated here, but for the maximum credit it should be as much as a competent teacher, trained in laboratory methods, can accomplish in one year. In estimating the time employed, two hours of laboratory work will be counted as the equivalent of one recitation period. It will be to the advantage of applicants to present their laboratory notes and drawings.

Physics.

The maximum credit (2 courses) will be allowed for the requisite time spent upon any standard elementary text-book, if the work is accompanied by individual laboratory work. If no individual laboratory work has been done, only one course credit will be given, but the additional course credit will be allowed if the deficiency in laboratory work is made up at the University. It will be to the advantage of students asking full credit to present their laboratory note books.

Physiology and Physical Geography.

One course in each of these subjects may be offered. A full quarter's high school work in any standard text will be required.

Chemistry.

Credit for the minimum (2 courses) work in Chemistry will be allowed for the completion in a satisfactory manner of any standard elementary work in Inorganic Chemistry, accompanied by individual laboratory work. The third course (elective) should be a general course in Organic Chemistry, with individual laboratory work.

Drawing.

For entrance into the College of Arts and Sciences the maximum of three courses in Free Hand Drawing may be offered. To receive entrance credit in Free Hand Drawing instruction should have been designed to give the student an intelligent and accurate conception of form and light and shade, and the ability to express simply and directly such objects as natural and geometric form, still life, architectural details and casts from nature, the antique and life.

The training of the eye to observe with understanding rather than the teaching of any particular method of expression should be the aim of the instructor. No mechanical aids should be employed. The pencil is recommended as the simplest and most convenient medium for elementary work. It is desirable that students seeking credit for drawing shall submit their work in addition to their general certificate.

History.

For admission to the University two courses in history are required. These may be either English and American history, or Greek and Roman history. In addition to either or both of these groups, other courses may be presented to the limit of six credits.

A credit implies a course of five hours a week for twelve weeks or its equivalent in time, and the use of a standard text book.

It is expected that the student will be thoroughly familiar with the important events in the periods of history he offers for credit, and will have a clear knowledge of the general line of development, both political and social. He will be expected to have the ability to make historical comparisons and to form independent judgments, and for this purpose collateral reading should always accompany the study of the text.

The courses offered by the student are to be selected from the following:

1. History of Greece.
2. History of Rome.
3. Mediaeval History.

4. Modern History.
5. History of England.
6. History of the United States.

The following texts are suggested: Myers's or Botsford's History of Greece; Allen's, Botsford's or Myers's History of Rome; Myers's Mediaeval and Modern History, Adams's European History, or Thatcher and Schwill's Short Histories of Mediaeval and Modern Europe; Cowan and Kendall's or Montgomery's History of England; MacLaughlin's, Johnston's or Channing and Hart's History of the United States.

Existing Entrance Requirements.

Until September 1, 1903, candidates for admission may offer thirty-nine courses, all elective from the following list. They will be permitted, however, to enter under the requirements outlined above, and are advised to do so whenever it is possible:

1.	English Grammar,	2 courses;
2.	English Composition and Rhetoric,	5 courses;
3.	English Literature,	2 courses;
4.	Latin,	9 courses;
5.	Greek,	6 courses;
6.	French,	6 courses;
7.	German,	9 courses;
8.	Greek History,	1 course;
9.	Roman History,	1 course;
10.	Mediaeval History,	1 course;
11.	Modern History,	1 course;
12.	English History,	1 course;
13.	American History,	1 course;
14.	Civil Government,	1 course;
15.	Arithmetic,	1 course;
16.	Elementary Algebra,	3 courses;
17.	Plane Geometry,	2 courses;
18.	Plane Trigonometry,	1 course;
19.	Advanced Algebra,	1 course;
20.	Solid Geometry,	1 course;
21.	Botany,	2 courses;
22.	Physics,	2 courses;
23.	Chemistry,	3 courses;
24.	Zoology,	3 courses;
25.	Physical Geography,	1 course;
26.	Physiology,	1 course;

27.	Astronomy,	1 course;
28.	Drawing,	3 courses;
29.	Mechanic Arts,	3 courses;
30.	Military Science,	3 courses.

Admission on Certificate.

Students who present certificates for work done at any Accredited Preparatory School will, if the amount of work certified is sufficient to meet the entrance requirements, be admitted to the University without examination.

The certificates presented must be on the form prescribed by the Committee on Classification and Grades, or on a similar form, in order that the committee may readily determine the value of the certified work in University units. Diplomas are of no use in determining the value of work offered, and will not be accepted by the committee. Certificates which do not show enough credit for admission of the applicant to the University will be referred to the Principal of the Preparatory School.

Advanced Standing.

Students desiring advanced standing in College subjects must file their applications with the Committee on Classification and Grades within two weeks after their matriculation, and at the same time deposit with the committee any certificates of work done elsewhere that they desire to submit. In cases where the work certified has been done at Colleges of recognized standing, the committee will allow such credit as the certificate calls for, reduced to University units.

In other cases applicants will be referred to heads of departments for examination, and if the committee so orders, the applicant may present his certificates to the heads of departments for such recognition in connection with the examination as they may see proper to give.

Special Students.

As a rule special students must be over twenty-one years of age, but in exceptional cases permission to register as special students will be given to students under that age.

Special students may be assigned by their class officers to any courses to which they may secure admission, the consent of the instructor being necessary in every case. No entrance requirements will be exacted of special students, but should they ever become candidates for any University degrees or honors, all entrance requirements must be satisfied.

Degrees.

A baccalaureate degree in the College of Arts and Sciences is conferred upon any student who satisfies all entrance requirements and satisfactorily completes forty-two college courses, selected in accordance with the following provisions.

The subjects of study are arranged in three groups:

I. LANGUAGE: Latin; Greek; French; Spanish; Italian; German; English.

II. SCIENCE: Mathematics and Astronomy; Physics; Chemistry; Geology; Botany; Zoology; Anatomy and Physiology.

III. PHILOSOPHY: Philosophy; Pedagogy; History; Political Science; Economics; Sociology.

Requirements.

I. GENERAL REQUIREMENTS:

1. Major: 9 courses in one group which may be
   (a) 9 courses in one subject, or
   (b) 6 courses in one subject and 3 courses in another subject.
2. Minor: 6 courses in another group.
3. Sub-Minor: 3 courses in remaining group.

A thesis may be required at the option of the class officer, in which case it shall count as one of the forty-two courses required.

II. SPECIAL REQUIREMENTS:

1. For the degree of A. B.: 2 courses of Rhetoric unless anticipated by examination; 12 courses in Latin (including required preparatory courses), or 6 courses in Greek (and the 6 preparatory courses in Latin); and 3 courses in a Modern Language.
2. For the degree of B. S.:
   (a) 2 courses of Rhetoric unless anticipated by examination; 6 courses of German and 3 courses of French, or 6 courses of French and 3 courses of German; 3 courses of Mathematics.
   (b) The major in the science group.

Master of Arts.

The degree of Master of Arts is conferred upon any graduate of this University or of another institution of equal rank who presents:

1. Ten courses or their equivalent, at least three of which shall belong to the student's major subject, which shall be the same as his

undergraduate major. In no case shall the aggregate number of the major courses be fewer than twelve.

2. A thesis showing original ability and marked attainment in the major subject.

Doctor of Philosophy.

The degree of Doctor of Philosophy is conferred upon Masters of Arts of West Virginia University, or holders of an equivalent degree, upon the following conditions:

1. Candidates must spend at least two years in resident study at some University, and must be in residence at this University during the last three quarters before receiving the degree. The requirements of time are, however, wholly secondary. The degree will not be given for the completion of prescribed work, nor for study during a stated period, but only on the ground of long study and high attainments in one branch of learning.

2. Candidates shall choose a major subject and cognate minor work. To the latter they will devote not more than one-third of their time.

3. The candidate must prepare a dissertation on some phase of his major subject, which shall give evidence of his power of independent investigation, and shall be a contribution to knowledge. The thesis must be in creditable literary form, although for acceptance it will depend chiefly on its subject matter.

4. Not later than nine months before the date on which the candidate expects to receive the degree, he shall file with the Committee on Classification and Grades the subject of his thesis, with the approval of his major professor, and a full statement of his work in candidacy for the degree; and shall satisfy this Committee of his ability to use French and German in his investigation.

5. The thesis shall be presented to the Committee on Classification and Grades at least two months before the date on which the degree is expected. It will be referred to a Committee of three, one of whom shall be a person not connected with this University. If the thesis is approved the candidate shall proceed to an examination, which shall be conducted by the instructors in charge of his subjects, with the aid of the same committee of three and the Committee on Classification and Grades. The date of the examination shall be determined by the Committee on Classification and Grades.

6. If the candidate satisfactorily passes the examination he shall, before receiving the degree, deposit with the librarian of the University a typewritten or printed copy of the thesis.

7. The publication of the thesis is regarded as a part of the evidence of the candidate's fitness to receive the degree. If the thesis cannot be published before the conferring of the degree, the candidate must either furnish the Committee on Classification and Grades evidence of completed arrangements for publication, or deposit with the Treasurer of the University a sufficient sum to cover the cost of publication, in approved form. When the thesis is published one hundred copies shall be presented to the University library, and the deposit made with the Treasurer will be returned.

DEPARTMENTS OF INSTRUCTION.

In the following announcements, unless otherwise noted, each course described is a full course, the class meeting five times a week, Mondays to Fridays inclusive, through one entire quarter. The quarter during which the course is given, as well as the hour and class-room, are named, whenever possible, at the end of the announcement of each course. All courses are designated by the name of the department and the number of the particular course . Thus the first course in Psychology is known as "Philosophy 1;" the course in Dynamos and Motors is known as "Physics 10," etc. The abbreviations used are: U., University Hall; S., Science Hall; M., Martin Hall; C., Commencement Hall; A., Agricultural Experiment Station; N. F., North Fife Cottage; S. F., South Fife Cottage; G., Gymnasium.

NOTE.—The departments of instruction are arranged in alphabetical order.

Anatomy and Physiology.

Professor Caldwell.

Anatomy.

Anatomy is taught by lectures, demonstrations, recitations, from text books, and dissection. The study is divided into 3 courses, corresponding to the fall, winter and spring quarters of the University.

The student is advised, as a preparation for the study of anatomy and physiology to have a thorough knowledge of English, Latin, 3 courses Physics, 3 courses Chemistry, 3 courses Biology, including embryology, and for advanced medical work, to have a reading knowledge of German and French.

1. Anatomy. A short review of embryology before beginning the study of anatomy. Osteology. A thorough study of the bones and articulations. Fall, 8:30.

2. Anatomy. Muscles and regional anatomy. Dissection during this quarter. Abundant material can be obtained under the "Anatomical Law," and the student is required to dissect one or more parts during the year. Winter, 8:30.

3. Anatomy. The circulatory system, respiratory system and the alimentary system, including all the viscera of the thoracic and abdominal cavities. The anatomy of the nervous system is studied in connection with advanced physiology. Spring, 8:30.

Text-books: Gray, Morris, and Gerrish.

Physiology.

Elementary physiology is begun in the fall quarters and advanced physiology for medical students, who have had at least one quarter in anatomy, is taken up in the winter quarter and continued through the spring quarter. The subject is taught by lectures, demonstrations, and recitations. For prerequisites see anatomy. Elementary physiology is intended for those students not preparing for the degree of M. D.

1. Elementary Physiology. The subjects treated during the quarter are physiological ingredients, carbohydrates, proteids, albuminoids, enzymes, food, digestion, absorption, and circulation. Physiology 1 is also taught in the spring quarter. Fall, 9:30.

2. Elementary Physiology. Physiology of the skin, the kidneys, the ductless glands, the nervous system and special senses. Winter, 9:30.

3. Advanced Physiology. Protoplasm, cell life, the physiology of tissues, digestion, absorption and circulation. Winter, 11:30.

4. Advanced Physiology. The nervous system and the special senses are the chief studies during this term. Spring, 11:30.

These courses of advanced physiology are intended for medical students only.

Text-books: Kirke's 17th edition, Stewart, and the American Text book of Physiology. For elementary work, Raymond's Physiology, 1st edition.

Biblical Studies.

Professor Reynolds.

Instruction in this department is given in connection with the Chapel Exercises. It consists of lectures by the instructor, an outline and notes by the students, text-book assignments and weekly reviews. The instruction given each quarter is equivalent to one-third of a course. There are four full courses, viz.:

1. The History of the Bible, origin, authorship, manuscripts, versions, the canon, and the English Bible.

2. The People of the Bible, a sketch of the origin, history and characteristics of the Hebrews, Israelites and Jews.

3. **The Religion of the Bible,** an outline of the Hebraic or Patriarchal, Mosaic and Christian dispensations.

4. **The Literature of the Bible,** the books of the Bible, their authors, contents, purpose, style, and literary form.

Course 4 will be given 1902-3, and will include the following subjects:

1. The historic books of the Bible.....Fall, 8.00.
2. The prophetic books of the Bible .....Winter, 8:00.
3. The devotional and didactic books of the Bible..Spring, 8:00.

Biology.

Professor J. B. Johnston and Dr. K. C. Davis.

Botany—Dr. Davis.

2. **Ecology of Fall Plants.** This course consists of field and laboratory study of our most common fall-blooming plants, with reference to their inflorescence, multiplication, preparation for winter, and other ecological points. Fall; 30 U.

3. **Ecology of Spring Plants.** The work in this course is similar to that of the fall term, but deals with spring-flowering plants. Both the courses are conducted with the use of a special Ecological blank, in which twenty-five or more questions are asked concerning the plant. Spring; 30 U.

4. **Cytology and Simple Tissues.** A microscopic study of the cell in its various parts, contents, functions, and forms. This leads to a study of the simpler tissues, and so far as time permits, the three main tissue systems are studied. Prerequisite, at least one term in college botany. Winter; 30 U.

5. **Tissue Systems.** This course is offered as a second term's work to follow Course 4 in Structural Botany, dealing with the fundamental tissue system, fibro-vascular tissue system, and epidermal tissue system. Winter; 30 U.

6. **Plant Reproduction.** A study of the plans of reproduction found among Cryptogamic plants, and a tracing of their life history. This course is offered to a sufficient number of students who have finished at least three of the above courses. Fall; 30 U.

7. **Plant Physiology.** Laboratory experiments. Prerequisites as in Course 6. Winter; 30 U.

Zoology—Professor Johnston.

The courses in Zoology are to be taken in the order of their numbers, except Course 4, which is optional. Courses 6, 7, and 8 are in-

tended on the one hand for prospective medical students, as a preparation for human anatomy and physiology, and on the other for those who make zoology their major subject. The latter are strongly advised to begin zoology in their freshman year and to devote their senior year to research work, preparing a thesis for graduation. If worthy, the thesis will be published.

1, 2, and 3. General Zoology. The aim of these courses is to acquaint the student with the chief types of animal structure and with the general principles of biology.

Two-thirds course. Fall, Winter, Spring.
Lectures, M., at 8:30.

Laboratory work, five hours per week, Tu., Th., and F., A. M., or M., W., P. M.

4. a, b, and c. The Evolution of Animal Life. Lectures and demonstrations with assigned reading and written reports. To accompany Courses 1, 2 and 3. One-third course, Fall, Winter, Spring.
Lectures, W., at 8:30.

6. The Cell. A study of the structure and functions of the cell, cell-division, reproduction in the Protozoa, maturation and fertilization of the germ cells, and the elements of the fundamental tissues. Elementary instruction in microscopic technique.

One and one-third course, Fall.
Lectures, M., W., at 10:30.

Laboratory work twelve hours per week, forenoons, and M. W., P.M.

7. Vertebrate Embryology. Laboratory work on the cleavage of the ovum and the development of the salamander and the chick. Lectures on the comparative embryology of vertebrates. Hours and credit as in Course 6. Winter.

8. Comparative Anatomy of Vertebrates. Laboratory study of types of vertebrates with lectures on comparative anatomy, with especial reference to the progressive modification of organs. Hours and credit as in Course 6. Spring.

A working knowledge of French and German is prerequisite to the following courses:

11, 12, and 13. Comparative Neurology. These courses include a general study of the nerve elements and of the nervous systems of invertebrates, the comparative study of the minute anatomy of the central system of vertebrates, and the morphology of the cranial nerves. The student receives instruction in modern methods of neurological investigation and prepares his own slides. The lectures deal with the

minute structure of the vertebrate brain, including that of man, the terminal organs and their influence on brain structure.

Fall, Winter, Spring.

19. **Current Literature.** The advanced students and instructors form a Journal Club, which meets weekly for reports and discussion of recent literature. One course credit for the year.

20. **Research Work.** Properly qualified students may undertake research upon the anatomy or development of vertebrates or invertebrates.

Chemistry.

Professor Whitehill and Assistant Professor Kortright.

1. **Inorganic Chemistry.** This course is designed for beginners, and serves as a general introduction to chemical methods and operations. It includes a systematic study of the laws of chemical combinations, the source, preparation, properties and compounds of the non-metallic elements and the principles and theories of chemical philosophy. Experimental lectures, laboratory work, and recitations.

Fall, first section, 9:30; second section, 11:30.
Spring, 10:30; 20 S.

2. **Inorganic Chemistry.** This course includes the study of the metallic elements, and special attention is paid to the application of Chemistry in Agriculture, Engineering, Medicine, and every-day life.

Winter, first section, 9:30; second section, 11:30; Fall, 10:30; 20 S.

3. **Organic Chemistry.** This course includes the study of the more important organic compounds, together with the laboratory processes for the preparation of such compounds. Lectures, laboratory work, and recitations.

Spring, first section, 9:30; second section, 11:30; 20 S.

4. **Qualitative Analysis.** A laboratory course treating of the separation and detection of the common elements. In this course the students are expected to be able to write the reactions accruing in their work and their ability to do so is tested from time to time.

One-third course, Fall, Tuesdays and Thursdays, 1:30; 22 S.

5. **Elementary Quantitative Analysis.** This course includes a small number of simple gravimetric, volumetric, and electrolytic determinations, together with the study of the operations involved. Laboratory course.

One-third course, Winter, Tuesdays, Thursdays, 1:30; 22 S.

6 **Analysis of Coal, Coke and Water.** This course is designed especially for Engineering students, but is open to others who have

the necessary preliminary training. Laboratory course. One-third course. Spring, Tuesdays and Thursdays, 1:30; 21, 22 S.

7. **Toxicology.** Especially designed for medical students. The course will include a study of inorganic and organic poisons, their physiological effects and antidotes. Laboratory course.

Spring, Tuesdays and Thursdays, 1:30; 21, 22 S.

8. **Water and Food Analysis.** Analytical Chemistry as applied to domestic science. This course is in part identical with Course 7, but includes analysis of water and of foods.

Spring, Tuesdays and Thursdays, 1:30; 21, 22 S.

9. **Quantitative Analysis.** This course is designed for students who expect to make Chemistry a specialty. It includes exercises in determining the composition of ores, minerals, and various technical compounds. Instruction is also given in assaying, gas analysis, and in the analysis of iron and steel. Exercises are selected to give as wide an acquaintance as possible with laboratory methods.

Fall, Winter, Spring, 1:30; 21, 22 S.

10. **Iron Ores, Pig Iron, and Steel.** This course includes practice in the special methods of analysis of ores, pig iron and steel in use in the laboratories of the iron and steel works located in West Virginia and Western Pennsylvania. Fall, Winter, Spring, 1:30; 21 S.

11. **Medical Organic Chemistry.** This is a lecture and laboratory course in such special subjects of Organic Chemistry as carbohydrates, fats, proteins, and foods in general, together with certain organic amido and other nitrogenous compounds. Fall, 10:30 to 12:30; 21 S.

12. **Medical Analysis.** This course includes a study and practice of all the essential analytical methods as used in modern practice of medicine. Winter, 10:30 to 12:30; 21 S.

13. **Physical Chemistry.** Lectures and recitations giving non-mathematical exposition of the fundamental principles of chemical theory as developed during recent years. Spring, 11:30; 22 S.

14, 15, 16. **Organic Chemistry.** These courses are open to students of Pharmacy only. The courses are largely laboratory courses with E. Fischer's "Organische Praeparate" as laboratory manual and with Gattermann's "Methods of Organic Chemistry" and Lassar-Cohn's "Methods of Organic Chemistry" for reference. In addition to six hours' laboratory work a week, two lectures or recitations will be required. Richter's "Organische Chemie" (last German edition) will be used as a basis for these. The students will also be required to write abstracts and discussions of some of the best current articles on the

subject so as to familiarize themselves with the current chemical periodicals. Fall, Winter, Spring;

Tuesdays, Wednesdays and Thursdays, 10:30-12:30; 22 S.

Lecture and recitation hours to be arranged.

20. **Research Work.** Chemistry offers a wide field for investigation. Special work in any of the various departments of the science may be taken in the laboratory under the direction of the instructors, and credit will be given in proportion to the amount of work accomplished. 21, 22 S.

For courses in Agricultural Chemistry, see announcements of the College of Agriculture.

Economics.

Professor Reynolds.

1. **Principles of Economics.** An introduction to the study of the general subject of Political Economy. Special attention is given to the exposition of fundamental laws as operating in the production, distribution, exchange, and consumption of wealth. Instruction is given by means of text-book recitations, lectures and references to standard works. Fall, 8:30.

2. **Economic History.** A study of the progress and development of industry, especially in England and the United States, with a sketch of leading economic theories and schools. Text-book, lectures, and assigned reading. Winter, 8:30.

3. **Economic Problems.** An examination of the relations of capital and labor, the distribution of wealth, some proposed remedies and reforms, with a sketch of the theory and program of socialism. Text-book, lectures and assigned reading. Spring, 8:30.

4. **Money and Banking.** A discussion of the nature and functions of money; an examination of the monetary system of the United States, with a comparison of the monetary systems of the leading nations of the world; a sketch of monetary theories and proposed reforms; nature and functions of banks, and some requisites for an adequate national currency. Text-book, lectures and assigned readings. Fall, 10:30.

5. **Public Finance.** A study of public expenditures, sources of revenue, systems of taxation, financial policies, public debts and public credit. Text-book, lectures and assigned reading. Winter, 10:30.

6. **Public Economics.** An examination of the relations, interest and rights of the state in regard to economic enterprises; the practicability and expediency of public ownership and control of such

enterprises, with a study of the history and results of such control so far as it has been undertaken. Text-book, lectures and assigned reading. Spring, 10:30.

Education.

The courses offered in this De partment aim to contribute to the educational influences and to the professional efficiency of the schools of the state in the following ways: 1. To interest those students who may, without intending to use the knowledge in teaching, desire to study the science of education as a part of their general culture course. 2. To afford university students who wish to teach for a time after graduation the means of professional training commensurate with their academic training. 3. To furnish appropriate professional education to university students, and to any experienced teachers of suitable age and attainments, who may desire to fit themselves for teachers, principals, or superintendents of schools.

Students who elect Education as their major may combine with it a limited amount of work in psychology or sociology or philosophy. The required minor may be in any department of the University, but students are urged to do sufficient work in some one department to recommend them to teach a particular subject, as English, Physics, Mathematics, etc.

1. **History of Education, Ancient and Mediaeval.**—A study in the evolution of ideas and of educational ideals. Education as a social and political factor in the development of civilization. (1) A general survey of Oriental education—the Egyptian and the Hebrew education as types. (2) Greek education—Greek life and ideals—the development of social bonds, individualism, reason, human culture, and moral freedom. (3) Roman education—(a) Pagan schools, (b) Christian schools, (c) Greek influences. (4) Early Christian schools and scholars. (5) Muslim education. (6) The Middle Ages—(a) the seven liberal arts, (b) the revival of Charlemagne, (c) scholasticism, (d) rise of secular schools, (e) rise of universities. Fall, 10:30; 14 S.

2. **History of Education, Modern.**—A study of the development of modern education in Europe and America. 1. The Renaissance. 2. The Reformation. 3. Teaching organizations. 4. The development of modern educational theory—(a) humanism, (b) realism, (c) rationalism, (d) the scientific, physiological, psychological, and sociological ideas of education. 5. The development of modern national, state, and city systems. 6. The development of the modern curriculum and method. Winter, 10:30; 14 S.

3. **Educational Reformers and Educational Classics.**—Sturm, Comenius, Locke, Rousseau, Pestalozzi, Herbart, Froebel, Horace Mann, The whole or parts of the following classics will be studied: Plato's Republic, Quintilian's Institutes of Oratory, Ascham's School Master, Locke's Thoughts on Education, Rousseau's Emile, Comenius' Great Didactic, Pestalozzi's Leonard and Gertrude, Froebel's Education of Man. Not given 1902-3. Spring, 8:30; 14 S.

4. **Principles of Education.**—This course aims to lay the basis of a scientific theory of education. The process of education is explained from the standpoint of the doctrine of evolution; the principles thus arrived at are applied from the standpoint of the history of civilization, the developing powers of the child, and the cultivation of individual and social efficiency. Fall, 8:30; 14 S.

5. **Principles of Education.**—A continuation of course 4.
Winter, 8:30; 14 S.

6. **A Comparative Study of School Systems, Foreign and Domestic.**—The aim of this course is to give a general view of typical national, state, and city systems of schools. Each student taking this course will be required to make an intensive study of two or more city or state systems. Spring, 8:30; 14 S.

7. **School Administration and Supervision.**—This course aims to present the different phases of education—legislative, business, executive, and professional. The different forms of control as national, state, county, district, municipal. Functions of school boards, superintendents, principals, teachers. Relation of school officials—board to superintendent; superintendent to teachers, to pupils, to parents. Duties of superintendent or principal in his office, in class room, in teachers' meetings. The superintendent's opportunity to train his teachers. How to estimate a teacher's work. School management, grading, promoting, examinations, records, etc. Libraries and community cooperation as factors in educational work.
Winter, 11:30; 14 S.

8. **Applications of Psychology in Learning and Teaching.**—This course will present the principles that control rational learning and successful teaching as far as such principles may be derived from psychological laws. A number of psychological topics—the senses, sensation, perception, memory, imagination, reason, association of ideas. apperception, interest and attention, mental development, will and habit and character,—will be studied. Spring, 10:30; 14 S.

9. **School Hygiene and Sanitation.**—This course will aim to indicate the conditions necessary to health in school. The location and

construction of school buildings; lighting, heating, and ventilating; the school room and school furniture. The physiology and hygiene of mental exercise—the nervous system, length of recitation, rest and sleep, diet and dress, eyesight and hearing, contagious diseases, and school accidents. Fall, hour to be arranged; 14 S.

10. **The Art of Studying and Thinking and Teaching.**—The aim of this course is to point out how to study, how to direct the work of pupils, how to train pupils to think; to find a scientific method of the recitation and to determine the essential elements of teacning. Students will formulate and discuss lesson plans, observe, so far as conditions will permit, lessons given by regular teachers, and report the same in class. Spring, 11:30; 14 S.

11. **Seminar.** The curriculum of the elementary school. Wednesday, 2:00-4:00; 14 S.

12. **Seminar.** The rural school problem, state, county, and district supervision. Not given in 1902-3.

The attention of students is especially called to the announcement concerning the Teacher's Bureau of Information, on previous page of this catalogue.

The English Language and Literature.

Professor Patterson, Associate Professor Barbe, Mr. Smith, and Miss Brock.

There are four sections in this department: (1) Rhetoric, (2) English Language, (3) English Literature, (4) Elocution. Students who elect English as their major study must choose a particular section and take at least six courses in that section. The courses in this department are open to all students who have completed the entrance requirements in English. Courses beyond Course 2 in Rhetoric and Elocution are open only to students whose grade in Rhetoric 2 or Elocution 2 is 80 per cent or over.

The required minors for students making English Language and Literature their major are, for Sections 1 and 2, six courses in German; for Section 3, preferably six courses in German, but six courses in any language, in History, or Philosophy, may be offered; for Section 4, six courses in a Romance Language. Especially recommended for Sections 1, 2, and 3: All courses in English History, three courses in French, two courses in the Fine Arts, two courses in Philosophy, and three courses in one Science.

Except in Section 4, all students must take English Language 1. Students in all sections must take Rhetoric 1 and 2.

Students should arrange to take the courses in order. In this way the subject of any section may be studied in its development.

Rhetoric.

1. **Composition.** The work is almost wholly practical. Daily themes; criticism in class. Book reviews and other long essays. In addition to the text-book work, a special study of several prose masterpieces. It is intended that the student shall gain a thorough practical knowledge of all matters of rule. Lectures. Consultations.

Fall, 11:30; Spring, 8:30.

2. **Rhetoric.** In this course especial attention is given to matters of taste. The student is required to read and make written reports on a number of masterpieces. Long essays. Extempore composition and criticism. Class study of several standard works. Lectures. Consultations. Prerequisite, Rhetoric 1. Winter, 11:30.

3. **Exposition, Description and Narration.** Close study of literary masterpieces illustrating the various forms. Constant practice in applying principles. Criticism. Prerequisites, Rhetoric 1 and 2.

Spring, 11:30.

4. **Argumentation.** Analysis of the best specimens of this form of composition, together with constant practice in the preparation of briefs and in the writing of argumentative papers. Prerequisites, Rhetoric 1 and 2. Fall, 10:30.

5. **The Essay.** The essayists of the nineteenth century are studied to illustrate the uses of the essay form and the growth of this element in our literature. Criticisms, with written reports on assigned topics, and writing of typical essays. Prerequisites, Rhetoric 1 and 2. Fall, 10:30.

6. **The Short Story and Novel.** Examples of the various forms are read and methods analyzed. The development of the Short Story during this century is noted. Practice in writing. Criticism. Consultations. Prerequisites, Rhetoric 1 and 2. (Omitted in 1902-3.)

Winter, 10:30.

7. **The Poem.** The History of Versification. Lectures. Investigation of assigned topics. Composition and Criticism.

Winter, 10:30.

(Note.—Courses 6 and 7 are given in alternate years.)

8. **Style.** A study of style in nineteenth century English. Reference to Spencer, De Quincey, and others. Constant writing of papers. Criticism. Consultations. Fall, 8:30.

9. **Prose in the Fifteenth, Sixteenth, and Seventeenth Centuries.** A study of the beginnings of style in English prose. Individual investigation of assigned topics. Reports. Lectures. (Omitted in 1902-3.) Winter, 8:30.

10. **Style in the Eighteenth Century.** The development of an artistic sense in the writing of English prose. Study of the great masters of prose style in this century. Reports. Lectures. Winter, 8:30.

(Note.—Courses 9 and 10 are given in alternate years.)

11. **Themes.** An advanced course. Daily themes are required. The class will meet the instructor once or twice a week for discussion and criticism. Individual consultations. Prerequisites, Rhetoric 1 and 2. Spring, 10:30.

12. **Criticism.** The history and principles of literary criticism. Fall, 8:30.

(Note. Courses 1 to 4 inclusive are undergraduate courses; from 5 to 12, either undergraduate or graduate courses.)

English Language.

1. **Old English.** See Anglo-Saxon 1 in the Department of the Germanic Languages and Literatures. Fall, 8:30.

2. **Beowulf.** See in the Department of the Germanic Languages and Literatures. Winter 8:30.

3. **The Saxon Period.** See in the Department of the Germanic Languages and Literatures. Spring, 8:30.

4. **The Norman Period.** Selections will be read. Lectures. Prerequisite, Anglo-Saxon 1. Fall, 9:30.

5. **Chaucer.** Fall, 9:30.

6. **1350-1557.** Winter, 9:30.

7. **The Elizabethan Period.** The dramas will be merely noted. The principal work will be upon the poets, romancers, and essayists. Spring, 9:30.

8. **Spenser.** Winter, 8:30.

9. **Historical English Grammar.** Spring, 8:30.

(Note—The courses in English Language may be either undergraduate or graduate courses.)

English Literature.

Rhetoric 1 and 2 are prerequisites to the courses in this section. English Literature 1 is prerequisite to further courses in English Literature.

1. **General Survey of English Literature.** This course is intended to be an introduction to the study of literature. Its purpose is to

give the student a conception of the nature of literature, a general knowledge of the great field of literature, and a definite knowledge of a few English classics. Prerequisites, Rhetoric 1 and 2.

Fall, 8:30; Spring, 10:30.

2. **Seventeenth Century Literature.** Critical study of a few masterpieces of representative writers. Recitations and reports on assigned readings. Lectures. Prerequisites, Rhetoric 1 and 2, and English Literature 1. Fall, 11:30.

3. **Milton.** As thorough a study of his contribution to English Literature as is possible in one course. Spring, 11:30.

4. **The Classic Period.** Winter, 11:30.

5. **The Romantic School of Poetry.** Spring, 9:30.

6. **Victorian Poetry.** Fall, 10:30.

7. **The Rise of the English Drama.** From the beginnings to Shakespeare. Fall, 10:30.

8. **Shakespeare's Comedies.** The instructor will read the plays to the class. Assigned topics and written reports. (Omitted in 1902-3.)

Winter, 9:30.

9. **Shakespeare's Tragedies.** Conducted as course 8. (Omitted in 1902-3.) Winter, 9:30.

10. **Shakespeare's Histories.** Conducted as course 8.

Winter, 9:30.

(Note.—Courses 8, 9, 10, are given in this order, one course each year.)

11. **Shakespeare.** An attempt to measure the man and his work. Class reading of a few representative plays. Reports. Lectures.

Spring, 9:30.

12. **Shakespeare to Shirley.** The dramatic tendencies of this period. (Omitted in 1902-3). Winter, 10:30.

13. **Shirley to Sheridan.** Winter, 10:30.

(Note.—Courses 12 and 13 are given in alternate years.)

14. **English Literature in America.** Spring, 8:30.

15. **Dryden.** The instructor in charge of this department offers tentatively a new course on John Dryden. This will be conducted as a seminary. The whole contribution of Dryden to English Literature will be studied with the assistance of questions prepared by the instructor. All the critical literature obtainable on the subject will be carefully examined. Each student will investigate one topic thoroughly and present a paper at the end of the course, embodying the

result of his researches. The instructor will meet the class at a convenient hour once a week throughout the year. Credit will be given for two courses, or, if the paper prepared be of sufficient merit, credit will be given for one course and a thesis.

(**Note.**—Courses 1, 8, 9, 10, are undergraduate courses. The remaining courses are either graduate or undergraduate.)

Elocution.

(**Note.**—The necessity of English Literature in connection with the work in Elocution cannot be too often impressed. The professor of Elocution will recommend no student as a teacher of Elocution or as a public reader unless he has had, in addition to his courses in Elocution as his Major, at least six courses in English Literature.)

Certificate in Elocution.

Students who have satisfactorily completed twenty-four preparatory courses and twenty-two college courses as indicated below will be given a certificate signed by the Professor of Elocution, showing that they have taken the course in Elocution outlined by the head of that Department in this University.

For Admission:

English,	9 courses;
Foreign Language, preferably Latin,	6 courses;
Roman History,	1 course;
English History,	1 course;
American History,	1 course;
Elective,	6 courses.
Total,	24 courses.

For Certificate:

Elocution,	9 courses;
English Literature,	4 courses;
Rhetoric,	2 courses;
Philosophy,	2 courses;
	17 courses and

either, I,

Fine Arts, or Music,	2 courses;
Modern Language,	3 courses;
	5 courses.

or, II,

American History,	2 courses;
Political Science,	1 course;
Economics,	1 course;
Sociology,	1 course;
	5 courses.

Total number of college courses required for certificate, 22 courses.

1. **Elocution.** A preliminary course in the essentials of expression to remove faults and mannerisms and to establish correct use, freedom, and ease; to give the student control of the instruments of expression. Section drill, rehearsals, and recitals.

Fall, Winter, 11:30.

2. **Voice and Vocal Expression.** A thorough training in voice. The student will prepare a very few selections, almost all his time in and out of the class being given to rendering the voice an efficient instrument of expression. Individual training. Winter, 8:30.

3. **Expression.** A continuation of Course 1. Especial attention to the technique of the speaker's art. Individual and section drill. Assigned literature for analysis and interpretation. Prerequisite, Elocution 1. Spring, 11:30.

(Note.—Further courses in Elocution should not be undertaken without at least three courses previously in English Literature.)

4. **Expression in Drama.** Study of a Shakespearean play. Analysis and interpretation of character and scene. Problems of the stage. Stage management, etc. Lectures. Fall, 8:30.

5. **Oration and Argumentation.** Study of great orations. Lectures on extemporaneous speaking, structure and diction of spoken discourse, written argument, etc. Constant practice in extemporaneous speaking and debate. Preparation of briefs and of one oration.

Fall, 9:30.

6 **Oratory.** Preparation and delivery of orations. Study of models; briefs, etc. Daily practice in speaking. Prerequisites, Elocution 1 and 5. (Omitted in 1902-3.) Winter, 10:30.

7. **Extemporaneous Speaking and Debate.** Daily practice. Lectures. Prerequisites, Elocution 1. Winter, 10:30.

(Note.—Courses 6 and 7 are given in alternate years.)

8. **Expression and Criticism.** Each student will appear before the class once a week. Class criticism and discussion. Two original selections will be required. Prerequisites, Elocution 1 and 2, and Rhetoric 1. Winter, 3:00.

(The number of days each week will depend upon the number of students in the class.)

9. **Public Reading.** Individual training with a view to platform work. Methods of analysis and interpretation. The work of the student throughout this course is centered upon four selections. Prerequisites, Elocution 1 and 2. Spring, 9:30.

10. **Recitals.** Preparation of a program, and the giving of a public recital. Individual training. Open to students who have had six courses in Elocution. (Omitted in 1902-3.) (Note.—Courses 9 and 10 are given in alternate years.) Spring, 9:30.

11. **Interpretation.** Any student sufficiently advanced may pursue the analysis and interpretation of a complete play or other long masterpiece, or a number of works by some author, under the direction of the Professor of Elocution.

(Note.—The courses in Elocution are undergraduate courses.)

(Note.—Any competent graduate may pursue the investigation of a restricted field of study in English, under the direction of the head of the department.)

Geology and Mineralogy.

Professor Brown and Mr. Whitham.

1. **Physical Geography.** An elementary course for which no credit is given toward a college degree, but which must be taken before students are admitted to other courses in this department, unless they have had its equivalent elsewhere. Fall, 10:30; 30 S.

2. **Meteorology.** Man and nature; the economic products of the earth; meteorological instruments and methods. Open to any University student. Davis' "Physical Geography." Prerequisites, Physical Geography and Physics 1. Winter, 10:30; 30 S.

3. **General Geology.** A general course in dynamic and structural Geology. Economic applications of Geology will receive special attention. Numerous excursions will be made. The University is situated in a mining region, and within five miles of the western fold of the Appalachian mountains; the advantages for the practical study of Geology are therefore almost unequaled. Recitations, lectures and field work. LeConte's "Elements of Geology." Prerequisites, Chemistry 1, 2, Physics 2. Fall, 11:30; Spring, 8:30; 30 S.

4. **Paleontology.** The progress and development of plants and animals through the different ages of the earth. For illustration in this subject the University has an equipment of many thousands of fossils, casts and models. Recitations and lectures. LeConte's "Elements of Geology." Prerequisites, Zoology 1 and Botany 2.

Winter, 11:30; 30 S.

5. Economic Geology. Common rock and vein-forming minerals; Physical Geography and Geology of the United States; the origin of ore deposits; mining terms and methods; metalliferous deposits. Recitations and lectures. Tarr's "Elements of Economic Geology." Prerequisite, Geology 3. Spring, 11:30;30 S.

6. Advanced Economic Geology. The fuels—coal, oil and natural gas—soils, clays and fertilizers, precious stones and building stones. The University is in the midst of a great coal-producing region, while oil and gas wells are within easy reach. Recitations and lectures. Tarr's "Elements," and Merrill's "Stones for Building and Decoration." Prerequisite, Geology 5. Fall, 10:30; 30 S.

7. Mineralogy. Crystallography; physical qualities of minerals; description of minerals consisting of basic elements to the silicates. The University has a good collection of minerals for practical instruction. Open to all University students. Recitations, lectures and practical determinations. Dana's "Manual of Mineralogy." Fall, 8:30; 30 S.

8. Advanced Mineralogy. The silicates and hydrocarbon compounds and their determination. Dana's "Manual of Mineralogy." Winter, 8:30; 30 S.

Germanic Languages and Literatures.

Professor Truscott and Mr. Porterfield.

Note.—The text-books named in the following courses may be changed at any time, but the grade and character of the work outlined in each course will remain the same.

German.

1. Elementary German. A course for beginners, the object being to acquaint the student with the elements of the grammar, to give him a reading knowledge of the easiest German prose, and as much practice as possible in pronunciation. Thomas' "Grammar," Part I; Super's "Elementary German Reader," Part I.

Fall, first section, 9:30; second section, 10:30; 19 U.

2. Elementary German. A continuation of Course 1. Reading of easy prose and poetry. Several poems will be memorized and special attention given to correct pronunciation. Super's "Elementary Reader" Parts II, III, IV. Leander's "Traeumereien." Hervey's Exercises to Thomas' "Grammar."

Winter, first section, 9:30; second section, 10:30; 19 U.

3. Elementary German. A continuation of Course 2. Reading, dictation and conversation. Elementary work in composition, accompanied by a review of the main points of the grammar and a special

study of the irregular verbs. "Immensee;" "Hoeher als die Kirche;" "L'Arrabbiata" (Lentz' edition): Hervey's Exercises to Thomas' "Grammar." Spring, first section, 9:30; second section, 10:30; 19 U.

4. **German Prose.** Rapid reading of a large amount of prose by modern authors to render the student familiar with the idioms of the language and give a large and varied vocabulary. Nichol's "Three German Tales;" Bernhardt's "Novelletten-Bibliothek," vol. I.

Fall, 8:30; 19 U.

5. **Composition.** Practice in writing German and translation of English prose into German. Discussion of grammatical points in connection with the translation. Study of the irregular verbs. Dictation. Reading at sight. Harris' "Prose Composition;" Thomas' "Grammar," Part II. Winter, 8:30; 19 U.

6. **German Poetry.** Translation of two long poems. Reading and memorizing a great number of short well-known poems. Von Klenze's "Deutsche Gedichte;" "Hermann und Dorothea" (Hatfield); "Trompeter von Saekkingen." (Frost). Spring, 8:30; 19 U.

7. **Survey of German Literature.** This course deals in outline with the history of the literature, its beginnings and development, and lays stress on the prominent authors and chief epochs. Assigned private reading in the various standard histories of the literature. Translation in class of pieces, representative of the different writers and periods. Fall, 10:30; 18 U.

8. **Advanced Composition.** Dictation and conversation. Exercises in conversation will be based on Bronson's "Colloquial German;" Jagemann's "Prose Composition." Winter, 10:30; 18 U.

9. **Heine.** Study of his life. Reading from his prose and poetry. "Reisebilder;" "Die romantische Schule;" "Das Buch der Lieder."

Spring, 10:30; 18 U.

10. **Lessing.** Study of his life. Reading of "Miss Sara Sampson;" "Minna von Barnhelm;" "Emilia Galotti;" "Nathan der Weise." Weekly themes in German on assigned subjects. Fall, 9:30; 18 U.

11. **Goethe.** Study of his life. Reading of "Werther's Leiden;" "Iphigenie auf Tauris;" "Egmont;" "Torquato Tasso." Weekly themes in German on subjects selected by the student. Winter, 9:30; 18 U.

12. **Schiller.** Study of his life. Reading of "Don Carlos;" "Marie Stuart;" "Die Jungfrau von Orleans;" "Die Braut von Messina;" "Wilhelm Tell." Long bi-weekly themes in German on assigned subjects.

Spring, 9:30; 18 U.

16. **Scientific German.** Intended for students in the scientific courses who have had at least a year of elementary German. The

purpose is to teach the students to read at sight scientific articles in German. Hodges' "German Science Reader;" Cohn's "Ueber Bakterien." Winter, 11:30; 19 U.

17. **Journalistic German.** This course is a continuation of course 16. A part of the time will be devoted to scientific articles. Newspaper and magazine articles on various subjects. Prehn's "Journalistic German;" Stern's "Geschichten von Deutschen Staedten." Spring, 11:30; 19 U.

20. **Middle High German.** Grammar. Bachmann's "Mittelhochdeutsches Lesebuch." Reading and translation into modern German of "Das Nibelungenlied." History of the literature of the period.

Twice or three times a week throughout the year at an hour to be arranged.

Anglo-Saxon.

1. **Anglo-Saxon.** Introductory course for students in English and German. An introduction to the historical study of the English language. Grammar and translation of Anglo Saxon prose. Study of word forms with special reference to modern English. Prerequisites: English 1; Rhetoric 1 and 2; German 1, 2, 3. Bright's "Anglo-Saxon Reader." Fall, 8:30; 18 U.

2. **Anglo-Saxon.** Translation of "Beowulf." Winter, 8:30; 18 U.

3. **Anglo-Saxon.** Translation of Cynewulf's "Christ." History of Anglo-Saxon literature and consideration of its principal monuments. Brooke's "English Literature from the Beginning to the Norman Conquest." Spring, 8:30; 18 U.

Greek Language and Literature.

Professor Green and Mr. Ohern.

1. **White's First Greek Book (Chapters I-XL).** This course is for beginners. The work covers pronunciation, accent, declensions and conjugations, etymology of words, and simple translations from Greek into English and from English into Greek to illustrate the principles of grammar as given in the text. Fall, 9:30; Spring, 8:30; 8 M.

2. **First Greek Book (Completed).** This is a continuation of Course 1. Prerequisite, Greek 1. Fall, 10:30; Winter, 9:30; 8 M.

3. **Xenophon's Anabasis (Book 1).** Study of connected discourse and syntax. Prose composition once a week. Texts, Goodwin and White's "Xenophon's Anabasis;" Goodwin's "Greek Grammar;" Pearson's "Greek Prose Composition." Prerequisites, Greek 1 and 2. Fall, 11:30; Winter, 10:30; Spring, 9:30; 8 M.

4. **Xenophon's Anabasis (Books II, III and IV).)** Prose Composition once a week. A study in forms of Greek narrative. A fuller knowledge of the grammar is required. Prerequisites, Greek 1, 2, and 3. Goodwin's "Xenophon's Anabasis;" Goodwin's "Greek Grammar;" Pearson's "Greek Prose Composition."

Fall, 8:30; Winter, 11:30; Spring, 10:30; 8 M.

5. **Lysias' Orations.** Prose composition once a week. A study of the form of Greek orations and Lysias' style. Collateral library work assigned to each student. Prerequisites, Greek 1, 2, 3, and 4, or their equivalent. Winter, 8:30; Spring, 11:30; 8 M.

6. **Homer's Iliad or Odyssey (Books I, II, and III) and Homeric Verse.** All the text is read metrically, and passages are memorized. Etymology, Mythology, and Prosody receive special attention. Seymour's "Iliad." Collateral reading: Jebb's "Introduction to Homer," Gladstone's "Time and Place of Homer." Prerequisites, Greek 1, 2, 3, 4, 5. Spring, 8:30; 14 U.

7. **Lucian's Shorter Dialogues.** Those who have had two years or more of Greek are eligible to membership in this course. "The Dialogues of the Dead" and other short dialogues will be read. "Selections from Lucian," by Williams. Winter, 10:30; 14 U.

8. **Aeschines Against Ctesiphon.** The aggressions of Philip of Macedon, the political institutions of Greece and the constitution of Athens are studied as an introduction to course 15. "Aeschines against Ctesiphon," by Richardson. Fall, 9:30; 14 U.

9. **Plato's Apology and Crito.** A study of Athenian methods of judicial procedure and criminal jurisprudence will accompany the reading of the Apology. Dyer's "Apology and Crito."

Fall, 1903, 11:30; 14 U.

10. **Portions of Plato's Charmides, Laches and Lysis.** A brief outline study of the history of Greek Philosophy will be presented with this course, and the philosophic content of the dialogues read will receive careful attention. Newhall's "Charmides, Laches and Lysis."

Fall, 11:30; 14 U.

11. **Greek Literature in English Translation.** A course of lectures tracing the development of artistic forms of literary expression among the Greeks. Some of the masterpieces of Greek Literature are read in standard English translations. Frequent written reports by members of the class upon assigned readings. This course is intended for mature students of considerable experience in the study of language and literature, but no knowledge of the Greek language is required. Capps' "Homer to Theocritus." Collateral reading: Jebb's Greek Literature, Mahaffy's "History of Greek Literature." Fall, 8:30; 14 U.

12. **Thucydides. Book V.** In connection with the reading of the text, a study of the political history of Athens and Sparta during the last three decades of the fifth century, B. C., will be undertaken. Fowler's "Thucydides," Book V. Fall, 10:30; 14 U.

13. **The Clouds of Aristophanes.** The reading of the text will be supplemented by lectures on the development of Greek Comedy, and the influence of the stage upon the social and political life at Athens. This course is intended to follow Course 9. Humphrey's "Clouds." Winter, 1904, 11:30; 14 U.

14. **Euripides' Bacchae.** The development of the Greek drama and the poetical beauty and literary finish of this production are studied. Metrical systems given special attention. Supplemental reading, "The Tragic Drama." by Haigh. Winter, 11:30; 14 U.

15. **Demosthenes on the Crown.** Stress is laid on correct use of synonyms, Greek rhetoric and oratory. Frequent sight translations to catch the spirit of the orator. "Demosthenes on the Crown," by D'Ooge. Winter, 9:30; 14 U.

16. **Aeschylus' Prometheus Bound.** History of the development of dramatic art among the Greeks. Study of the adaptation of epic and lyric forms to the purpose of the drama. Much attention is given to the metrical systems of the lyric passages. Allen's "Prometheus Bound of Aeschylus." Winter, 8:30; 14 U.

17. **The Antigone of Sophocles.** A study of the Greek trilogy. Lectures on the Greek theatre. D'Ooge's "Antigone of Sophocles." Spring, 1904, 11:30; 14 U.

18. **New Testament Greek.** John's Gospel and the Acts of the Apostles. In the translation, pure, idiomatic English of the nineteenth century is required. Westcott and Hort. Spring, 1904, 9:30; 14 U.

19. **New Testament Greek...** Mark's Gospel, James and Galatians. Spring, 1903, 9:30; 14 U.

20. **Selected Odes of Pindar.** Much attention is given to mastering, not theoretically, but practically, the form. The poems are read rhythmically over and over with the purpose of developing an appreciation of the lyrical perfection of these exquisite works of art. Seymour's "Odes of Pindar." Spring, 1903, 11:30; 14 U.

21. **Myths and Legends.** A study of those Myths and Legends upon which a large number of ancient and modern classics are based and to which frequent reference is made in English literature. No knowledge of Greek language necessary. Prerequisite for major credit, Greek 5. Guerber's "Myths of Greece and Rome." Spring, 8:30; 8 M.

22. Seminary in Greek. Papers and discussions on assigned topics. Larger opportunities for original investigation and specialization. Graduate students and those well advanced in their college course, who desire to become specialists in this department, should take this course. Credit is given for one-third of a course each quarter, or more if the work accomplished justifies it.

Fall, Winter and Spring, Bi-weekly, Monday, 2:00-4:00 P.M.; 14 U.
Professor Green and Mr. Ohern.

History.

Professor Fast, Associate Professor Daniels, and Mr. Poe.

For introductory courses in History, see the Preparatory Department announcements.

7. History of Greece. This course will trace the history of Greece from the beginning of the Persian wars to the Roman conquest. The mythology of the Greeks, the contributions of earlier nations to the Greek civilization, and the constitutional development of the pre-Persian period, will be treated in preliminary lectures. The student will also be given, by means of lectures and collateral reading, some acquaintance with the literature, philosophy, and art of the Greeks.

Fall, 11:30; 4 M.

8. History of Rome. In this course a brief outline will be given of the development of the Roman republic previous to the second century. In tracing the subsequent history of the republic, the following topics will receive special attention: the agrarian question; the development of the Roman provincial system; the influence of Hellenism; the development of the popular and conservative parties, and the party struggles to the death of Caesar. In the history of the empire, the following topics will be considered: the organization of the empire; Roman citizenship; provincial government; the army; the rise of Christianity; economic conditions; the frontiers, and the contact of the empire with the barbarians. Winter, 11:30; 4 M.

9. Mediaeval History. In this course a study is made of the conditions of the Roman Empire in the third, fourth and fifth centuries, A. D.; of the character and course of the Teutonic migrations; of the development of the new nations; and of the great movements and the institutions of the middle ages. Spring, 11:30; 4 M.

10. Modern History. Beginning with the Renaissance, this course treats of the transition from mediaeval to modern times, as marked by the Renaissance and the Reformation, with the accompanying enlarge-

ment of geographical and scientific knowledge; of the religious wars and settlements; and of the political, social, economic and territorial changes of the last four centuries. Fall, 9:30; 4 M.

11. History of England to the Accession of the Tudors. Winter, 9:30; 4 M.

12. History of England from the Tudor Period to the Present Time. Spring, 9:30; 4 M.

13. History of Germany to 1493. Winter, 1903, 10:30; 4 M.

14. History of Germany from 1493 to the Present Time. Spring, 1903, 10:30; 4 M.

15. The Renaissance and the Reformation. This course has the double purpose of showing the development in the later middle ages of those forces which gave to modern civilization its characteristic stamp, and of furnishing the student an opportunity to make himself familiar with the lives and work of the leaders in the literary, artistic and religious movements of the period. Fall, 1902, 10:30; 4 M.

16. History of France to 1789. Fall, 1903, 10:30; 4 M.

17. History of the French Revolution and the Napoleonic Wars. A detailed study of social and political conditions in France prior to the Revolution; of the events of the period from 1789 to 1815; and of the permanent results in France and other European countries. Winter, 1904, 10:30; 4 M.

18. History of Europe since 1815. In this course a study will be made of the conditions at the beginning of the period, and of the settlements effected by the Congress of Vienna. The history of each country will then be traced with special reference to the working out of the principles of constitutional government and nationality. Spring, 1904, 10:30;4 M.

20. Seminary in American History.

21. American Colonial History (1492-1776). The primary object of this course is to trace the beginnings of our institutions and the sources of our constitution in the separate settlements; how those settlements were gradually drawn togetner into colonies; and how the colonies were pieced together into states forming an indissoluble Union. Fall, 9:30; 6 M.

22. Political and Constitutional History of the United States (1776-1829). Winter, 9:30; 6 M.

23. Political and Constitutional History of the United States (1829-1900). Spring, 9:30; 6 M.

24. Selected Topics in the Study of American Institutions. Prerequisites, Courses 21, 22, and 23.

25. **A Study of the Sources and Literature of American History.** Half course. Twice a week. Prerequisites, Courses 21, 22, and 23. To be given in alternate years in the Winter Quarter and oftener if demanded.

The method of study is substantially the same in all courses in American History. There will be lectures, reading of selected references to sources and secondary authorities, weekly written papers, and special written work. Clear and idiomatic English is expected in all papers and note-books written by the student. In all courses the student is presumed to be familiar with the general narrative history of the United States. In courses 21, 22, and 23, while special emphasis is laid on political and constitutional history, some attention will be given to social and economic conditions.

Latin Language and Literature.

Professor Douthat.

The seven divisions here presented are intended to be consecutive, but the courses in each division are not graded. Hence a student may enter upon any course of a division, provided he has had at least two courses of the division preceding or their equivalent. If, therefore, he cannot be present at the opening of the Fall or Winter Terms, there is nothing to hinder his entrance upon the courses offered for the Spring Term, and then at the beginning of the following year, he can take at least one of the courses of the preceding year, and still have time for two courses of the following year.

For courses 1 to 12, inclusive, see announcements of the Preparatory School.

I. Roman Anthology.

12. **Cicero's Amicitia and Senectute,** with study of synonyms.
Winter, 11:30; 21 U.

13. **Horace's Odes and Epodes,** with scanning.
Fall, 11:30; 21 U.

14. **Mediaeval Latin Hymns,** with scanning, or **Horace's Epistles.**
Spring, 11:30; 21 U.

Latin composition the last two weeks of each term.

II. Roman Philosophy.

15. **Cicero's De Officiis** or **De Finibus, with study of synonyms.** Coordinate with Course 5 in Philosophy. Fall, 9:30; 21 U.

16. **Seneca's Moral Essays,** with a study of his times. Coordinate with Course 5 in Philosophy. Winter, 9:30; 21 U.

17. **Lucretius' De Rerum Natura**, with a study of his doctrines.
Spring, 9:30; 21 U.

Latin composition the last two weeks of each term.

III. Roman History.

18. **Cicero's Letters**, with a study of the great orator's times.
Fall, 10:30; 21 U.

19. **Livy, Books XXI or XXII**, with study of Roman History, or, if thought advisable, Sallust and other selections from History. Co-ordinate with course 8 in Department of History.
Winter, 10:30; 21 U.

20. **Tacitus: Germania and Agricola**, or his **Historiae or Annales**, with a study of the early Empire. Spring, 10:30; 21 U.

Latin composition the last two weeks of each term.

IV. Roman Drama.

21. **Plautus: Captivi, Trinummus, and Rudens**, with a study of the Roman Stage. Fall, 8:30; 21 U.

22. **Terence: Adelphoe, Phormio, and Heauton Timoreumenos**, with study of Greek and Roman Drama. Winter, 8:30; 21 U.

23. **Seneca: Medea, Hercules Furens, and Oedipus**, with study of Tragedy in Translation from Greek in Latin. Spring, 8:30; 21 U.

Latin composition the last two weeks of each term.

V. Roman Satire.

24. **Horace's Satires**, with a study of his times. Fall; 21 U.

25. **Juvenal's Satires**, with a study of contemporaneous history.
Winter; 21 U.

26. **Seneca's Apokolokuntosis, and Petronius' Cena Trimalchionis**, with a study of Nero's times. Spring; 21 U.

Readings, Papers, and Lectures, will take the place of Composition in this division.

Hours to be arranged with instructors.

VI. Latin Literature in English Translations.

27. **Study of Translations from Virgil or Horace or the Dramatists or Satirists**, with preparation of papers and supplemented by informal lectures. Fall; 21 U.

28. **Greek and Roman Mythology, or Roman Life**, with papers and informal lectures. Winter; 21 U.

29. **Roman Political Institutions**, with papers and informal lectures, and the Latin epigraphical documents. Spring; 21 U.

These three courses are open to all students who have had at least six courses of College Latin.

Hours to be arranged with instructors.

VII. Comparative Philology.

30. **Greek and Latin or other Indo-European Languages Compared,** the study being introduced through New Testaments, which can now be had in many tongues.

Term and hours to be arranged with instructor.

This course will be open to those who have already had at least six courses in two different Romance or Teutonic Languages.

All examinations for advanced standing in Latin must include Latin Composition.

Mathematics.

Professor Stewart.

(Courses 1 to 6 are preparatory.)

7. **Solid Geometry.** Geometry of the Prism, Pyramid, Cylinder, Cone and Sphere. Practical Exercises. Well's Solid Geometry. Fall, 11:30; Spring, 9:30.

8. **University Algebra.** Theorem of Undetermined Coefficients. Summation of Series. Theory and Practice of Logarithms. Logarithmic and Exponential Series. Solution of Higher Numerical Equations. Well's University Algebra. Fall, 9:30; Spring, 10:30.

9. **Plane Trigonometry.** Development of Formulae. Practical Exercises and Problems. Requisite: Course 8. Well's Revised Trigonometry. Fall, 10:30; Winter, 9:30.

10. **Spherical Trigonometry.** Development of Formulae. Practical Exercises and Problems, with Applications to Navigation and Astronomy. Bowser's Treatise on Trigonometry. Spring, 2:00.

11. **Plane Analytic Geometry.** Cartesian and Polar Co-ordinates. Properties of Conics: Circle, Ellipse, Parabola, and Hyperbola. Nichol's "Analytic Geometry." Winter, 10:30; Spring, 8:30.

12. **Analytic Geometry.** Higher Plane Curves. General Equation of the Second Degree. Geometry of Three Dimensions, Ellipsoids, Paraboloids, Hyperbolic-Paraboloids. Nichol's "Analytic Geometry." Fall, 2:00.

13. **Determinants.** Various Properties of Determinants. Laplace's and Cauchy's Method of Development. Differentiation of Determinants. Peck's "Determinants." Winter, 2:00.

14. **Theory of Equations.** Solution of Higher Equations, Cardan's Method for Cubic Equations, Sturm's Theorem, Horner's and Newton's Methods of Approximation, Fourier's Theorem. Macknie's "Algebraical Equations." Spring, 2:00.

15. **Differential Calculus.** Differentiation of Algebraic and Transcendental Functions. Taylor's and Maclaurin's Formula, Evaluation of Indeterminate Forms. Maxima and Minima, Tangents and Normals, Asympotes. Involutes and Evolutes, Curvature, Curve Tracing. Nichol's "Differential Calculus." Fall, 8:30; Winter, 11:30.

16. **Integral Calculus.** Integration of Algebraic and Transcendental Functions. Areas between Limits. Surfaces and Solids of Revolution. Double and Triple Integration. Center of Mass. Moment of Inertia. Nichol's "Integral Calculus." Winter, 8:30; Spring, 11:30.

Astronomy.

1. **Descriptive Astronomy.** Young's "General Astronomy." Winter, 3:00.

2. **Descriptive Astronomy.** Continuation of Course 1. Young's "General Astronomy." Spring, 3:00.

Philosophy.

President Purinton and Assistant Professor Deahl.

1. **Logic and Principles of Science.** A study of the processes of conception, judgment and reasoning; nature and laws of experience, induction and the subsidiary processes, such as observation, experiment, classification, and hypothesis; inductive methods; imperfect inductions and fallacies; elements of deduction and formal logic. Recitations, lectures and notes by the instructor, and references to standard authorities. Winter, 8:30; 14 S.

2. **Psychology.** An introductory course devoted to the study of the states of consciousness and mental processes, with an outline of the structure and functions of the nervous system, and the principles and methods of mental training and the application of Psychology to education. Recitations with lectures and notes by the instructor. Fall, 8:30; 10 S.

3. **Ethics.** A review of the mental processes that control conduct; fundamentals of morality, the moral faculty, ground of obligation, moral standard, moral law, moral sanction; moral culture; practical morality, personal and social duties. Recitations, and notes by the instructor. Fall, 10:30; 10 S.

4. **Christian Evidence.** An outline of the historical and moral proofs concerning the Christian system. A brief comparative view of other religious systems. Spring, 9:30; 10 S.

5. **History of Philosophy.** An introduction to the study of Philosophy, with an outline of the history of the leading philosophers and schools, ancient, mediaeval, and modern. Lectures, with references to best standard works. Fall, 2:00; 14 S.

6. **Mediaeval Philosophy.** Especially the influence of Christianity upon philosophy and vice versa, and the rise and content of Patristic philosophy. Winter, 2:00; 14 S.

7. **The Philosophy of the Renaissance.** A special study of the transition from mediaeval to modern philosophy, the struggle against theological domination and the rise of the natural sciences. Lectures, recitations and collateral reading. Spring, 2:00; 14 S.

Physical Training.

Mr. Printz.

A regulation gymnasium suit will be required for all work taken in the gymnasium. Each student will be measured, and then assigned special work to suit his individual needs. Games, such as basketball and indoor baseball, are provided for.

1. **Individual Body Building.** Monday, Wednesday, and Friday, 2:00 to 4:00 P. M.

2. **Apparatus Work.** a. Club Swinging. b. Horse, parallel bars, vaulting, horizontal, etc. Tuesday and Thursday, 4:00 to 5:00 P. M.

3. **Boxing.** Monday, Wednesday, Friday, 4:00 to 5:00 P. M. Those wishing to take boxing must furnish their own gloves.

4. **Fencing.**

Physics.

Professor Hodges and Mr. Whitham.

Students who elect Physics as major may combine with it work in Applied Mathematics, approved by the head of the department. The required minor work will be six courses in Pure Mathematics. Chemistry, Modern Languages, and English will be required. The professor in charge of the department will advise students in the choice of supplementary courses.

1. **Elementary Physics.** Recitations, supplemented by experiments and laboratory exercises. One hour per week at least will be

devoted to individual laboratory work. Thwing's Elementary Physics. Prerequisite, Plane Geometry 1. Fall, 11:30; 11 S.

Laboratory hours to be arranged.

2. **Elementary Physics.** Continuation of Course 1.

Winter, 11:30; 11 S.

Courses 1 and 2 will satisfy the entrance requirements in Physics. Students in the College who have presented not more than one course in Physics among the entrance requirements may receive college credit for these courses, if both are taken.

Engineering students in the Preparatory School, who have been credited with one course of Physics taken elsewhere, may take the remainder of their required preparatory work in Physics in the laboratory.

4. **Experimental Physics.** A laboratory course exclusively, consisting of elementary quantitative experiments. Open to students who do not take Course 6. Sabine's "Laboratory Course in Physics." Prerequisites, Physics 1 and 2, or equivalent work, and Plane Trigonometry.

May be taken in the Fall, Winter and Spring quarters, one-third course each quarter. Tuesdays, Thursdays, 1:30; 1 S.

6. **General Physics.** Mechanics. Lectures and recitations, accompanied by individual laboratory work, which, though elementary, is strictly quantitative. Required of candidates for Engineering degree. Ames' "Theory of Physics." Prerequisite, Analytic Geometry.

Fall. Lectures: Monday, Wednesday, Friday, 9:30; 11 S.
Laboratory: Monday, Wednesday, 9:30 and 1:30; 1 S.

7. **General Physics.** A continuation of Course 6. Heat, Electricity, Magnetism. Lectures and Laboratory work.

Winter. Lectures: Monday, Wednesday, Friday, 9:30 and 1:30; 11 S.
Laboratory: Monday, Wednesday, 9:30 and 1:30; 1 S.

8. **General Physics.** A continuation of Course 7. Sound and Light. Lectures and Laboratory work.

Students who have not taken Course 7 may be admitted to this course, if they have taken Course 6.

Spring. Lectures: Monday, Wednesday, Friday, 9:30; 11 S.
Laboratory: Monday, Wednesday, 9:30 and 1:30; 1 S.

11. **Sound and Light.** Lectures and laboratory measurements. Prerequisites, Physics 8, Mathematics 16.

Spring, 11:30; 11 S.

12. **Electrical Measurements.** Advanced laboratory work. The student uses measuring instruments of precision, sensitive galvano-

meters, apparatus for accurate measurement of resistance, current, electromotive force, induction, magnetic properties of iron, etc. Carhart and Patterson's "Electrical Measurements." Prerequisites, Physics 7, Mathematics 16. Hours to be arranged.

15. **Agricultural Physics.** Required of agricultural students. Open to all other College students. Prerequisite, Physics 1, or equivalent work elsewhere. King's Physics of Agriculture will be used as a text. Spring, 8:30; 11 S.

17. **Dynamos and Motors.** Direct current machinery. Elements of the general theory of dynamos and motors. Lectures and laboratory work. Prerequisite, Physics 7. Course 12 in part may be substituted for the laboratory work of this course. Sheldon's "Dynamo-Electric Machinery." Winter, 10:30; 11 S.

18. **Dynamos and Motors.** Alternating current machinery. Prerequisite, course 17. Spring, 10:30; 11 S.

20. **Special Work.** Students desiring to pursue any line of special work in the department of Physics will be given opportunity to do so to the extent the time of the instructors and the laboratory equipment will permit. Credit for such work will be allowed in proportion to the work done.

Political Science.

Professor Fast, Professor Johnson, and Mr. Poe.

A reading knowledge of Latin and French text is expected in the advanced courses, and a similar knowledge of German and Spanish will be of advantage. Under existing conditions it is recommended that students make Political Science a minor with History as a major; but it may be taken as major. If taken as a major, a familiarity with the outline of general history will be required together with a firm knowledge of modern political history, both European and American.

1. **Government of West Virginia; Its History and Administration.** This course is intended as a preparation for the more comprehensive study of our American political system, national, state and municipal. Some pieces of written work will be required, prepared from an investigation of material in the Library. Every student admitted to college courses in Political Science must possess a fair knowledge of the government of West Virginia, its history and administration. Entrance credit only will be given for this course. Fast and Maxwell's "History and Government of West Virginia." Spring, 9:30; 6 M.

2. **The Federal Government of the United States.** A study of the workings of the government and politics of the United States, includ-

ing a summary of government in general with reference to American conditions. There will be lectures, readings from references, and three special pieces of written work: (a) A study of political methods; (b) the actual workings of some department of the national government; (c) the actual workings of some part of a state or municipal government. Prerequisite, Political Science 1, and a familiar knowledge of American History. Bryce's "American Commonwealth;" Hart's "Revised Suggestions." Fall, 10:30; 6 M.

3. **Comparative Constitutional Government.** A comparative study of Greek, Roman, and Teutonic polity, of the constitutions of Great Britain, France, Germany, Switzerland, and other leading states of the world, and of the trend in the development of constitutional government. Open to advanced students only. Woodrow Wilson's "The State." Winter, 10:30; 6 M.

4. **Diplomatic History of the United States.** The treaty relations of the United States with foreign powers are studied in detail, including an examination of documents and methods. Spring, 10:30; 6 M.

20. **Seminary in Politics.** This course is intended for advanced students, and consists of the special study of selected topics. Credit will be given in proportion to the work accomplished.

Fall, Winter, Spring, 4:00 to 6:00; 6 M.

NOTE.—Constitutional and International Law. See announcements in the College of Law.

Romance Languages and Literatures.

Professor Chollet and Mr. Holden.

French.

1. **Elementary Course.** Grammar, reading and practice in pronunciation and oral understanding. Chardenal's Complete French Course; Bocher's Otto's French Reader.

Fall, first section, 8:30; 11 U; second section, 11:30.

2. **Elementary Course.** A continuation of course 1. Chardenal's Complete French Course; Bocher's Otto's French Reader.

Winter, first section, 8:30; 11 U; second section, 11:30.

3. **Elementary Course.** A continuation of course 2. Chardenal finished; Bocher's Otto's French Reader.

It is expected that in courses 1, 2, and 3, the elements of French Grammar will be mastered, and a fair pronunciation and oral intelligence acquired.

Spring, first section, 8:30; 11 U; second section, 11:30.

4. **Fiction of the Nineteenth Century.** Works by Daudet, Dumas, Andres Theuriet, George Sand, etc. Grandgent's Composition, Oral Practice ,exercises in dictation continued through courses 5 and 6. For students who have had one year of French. Fall, 10:30; 11 U.

5. **La Fontaine and His Fables.** Oral and written narration, conversation. Text-book: Fables de La Fontaine, edited by Gernsez, published by Hachette et Cie. Winter, 10:30; 11 U.

6. **Prose Reading on the Seventeenth Century.** One of Moliere's plays in prose. Grandgent's Composition. Spring, 10:30; 11 U.

7. **French Comedy.** (Advanced Course) with special study of the life and works of Moliere, published by A. Laplace, Sanchez et Cie. Fall, 11:30; 11 U.

8. **French Tragedy.** (Advanced Course.) The works of Corneille and Racine; outside reading; lectures on the drama from the Middle Ages to the death of Racine. Winter, 11:30; 11 U.

9. **L'Esprit Francais Du Jour.** French Conversation, based on two French daily newspapers representing opposing factions of French society of to-day. Spring, 11:30; 11 U.

10. **La Presse en France.** Extension of Course 9. Spring, 11:30; 11 U.

11. **La Tribune en France.** Extension of Courses 9 and 10. Spring, 11:30; 11 U.

Note.—Courses 9, 10 and 11 will be given in rotation, one each year, and are open to all students who have completed eight courses in French. Students intending to take one of these three courses must notify the instructor at least one month before the opening of the course, and pay for their subscription to a French daily.

12. **French Literature of the Nineteenth Century,** from the Romanticist movement to the present. Fiction, Lyric Poetry, Drama, Criticism. Fall, 10:30.

13. **French Literary Criticism.** Sainte Beuve, Taine, Brunetiere, Lemaitre, Gaston Paris, etc. Winter, 10:30.

14. **Victor Hugo,** his life and works, and his place in modern literature. Fall,10:30.

15. **French Literature of the Seventeenth and Eighteenth Century.** In this course comparatively little attention will be devoted to the drama, which is studied in Courses 6, 7, and 8. Winter, 11:30; 11 U.

17. **Old French.** The development of the language from Latin; phonology and grammar. La Chanson de Roland, Aucassin et Nicolette. Winter.

18. **Old French.** Special study of the Norman and Anglo-Norman dialects, and of their influence on the formation of English. Spring.

19. **French Dialects.** A study of the phonology and inflexions of the various French dialects, together with their geographical distribution. Winter.

20. **Research Work in French Literature** will be arranged for advanced students, including work on subjects suitable for theses.

Italian.

1. **Elementary Course.** Grammar, reading, and composition. It is desirable that students who take this course should have some knowledge of Latin. Fall.

2. **Elementary Course.** A continuation of Course 1. Winter.

3. **Elementary Course.** A continuation of Course 2. Spring.

4. **Italian Literature of the Middle Ages and Renaissance.** Two lectures or conferences each week, with a large amount of outside reading and preparation of reports on assigned subjects. Special attention will be paid to the influence of France on early Italian literature, to the life and works of Dante, and to the transition from the Middle Ages to the Renaissance. A reading knowledge of French or Italian will be of advantage, but not absolutely necessary. Winter.

Spanish.

1. **Elementary Course.** Grammar and reading, with practice in pronunciation, conversation, and composition. A knowledge of Latin or French will be of advantage to the students who take this course. Loiseaux' Spanish Grammar and Reader. Fall, 9:30.

2. **Elementary Course.** A continuation of Course 1; reading, conversation and composition. C. Fontaine's Doce Cuentos Escogidos; selections from Valera, Rueda, Pardo-Bazan, and other modern authors. Winter, 9:30.

3. **Intermediate Spanish.** A continuation of Course 2. Review of the grammar; study of idiomatic constructions; conversation; reading of works by Tamayo y Baus, Alarcon, Breton de los Herreros, Perez-Galdos, etc. Spring, 9:30.

4. **Modern Spanish Literature.** Careful study of works by modern Spanish and Spanish-American writers, such as Nunez de Arce, Perez-Galdos, Campoamor, Heredia, Selgas, etc. For students who have had one year of Spanish. Fall.

5. **Spanish Literature of the Renaissance.** Cervantes' Don Quijote de la Mancha; dramatic works of Calderon de la Barca, Lope de Vega, and other writers of the "Siglo de Oro." Winter.

6 **Old Spanish Literature** (for qualified students). El Cid, and other early works. Spring.

Sociology.

Assistant Professor Clark.

1. **Anthropology.** The general subjects discussed are: first, the antiquity of man, and the place man occupies in nature; second, the origin and early development of institutions which have made man what he is, and upon which contemporary society is based, such as language and writing, the arts of life and of pleasure, religion and science, mythology and history, the family and social structure. Tylor's "Anthropology," supplemented by lectures and assigned readings.

2. **Elements of Sociology.** A course on the structure and functions of contemporary society. The members of the class are assigned certain social institutions for personal observation and study, upon which they report fully in the class. The purpose is to bring out prominently the leading features in the associated life of human beings as it actually exists. Small and Vincent's "Introduction to the Study of Society," assigned readings and reports. Winter, 10:30; S. F.
Fall, 10:30; S. F.

3. **A Historical Survey of Sociological Thought.** This course traces the gradual development of sociological thought from antiquity through the Hebrew, Greek, Roman, and mediaeval writers down to our own times, the larger part of the course being devoted to the teachings of the most important modern sociologists. Lectures and assigned readings. Prerequisite, Sociology 2. Spring 10:30; S. F.

4. **Contemporary Charities.** The causes and conditions of poverty, methods of relief, historical and contemporary; special classes, children, the aged, unemployed, defective; charity organization. Lectures, research work. Fall, 9:30; S. F.

5. **The Treatment of Delinquents.** Causes of crime, criminal anthropology, history of methods of treatment, preventive measures, juvenile delinquents, legal factors. Lectures and assigned topics.
Winter, 9:30; S. F.

6. **Social Movements of the Nineteenth Century.** A study of organized efforts for social betterment, their principles and results. This includes the investigation of movements affecting every phase of social life, hygienic, economic, artistic, educational, religious. Lectures, readings, and the development of assigned topics. Spring, 9:30; S. F.

7. **Home Sanitation.** The house: site, architecture, construction, plumbing and sewerage, heating, lighting and ventilation, furnishing,

decorating, cleaning. Lectures, topical investigation and inspection of houses. Fall, 11:30; S. F.

8. **Public Hygiene.** Among the subjects discussed are: the care of streets and alleys, systems of sewage and garbage disposal, the inspection of food supplies, the prevention of epidemics, building and plumbing regulations, sanitary regulations. Lectures and research work. Winter, 11:30; S. F.

9. **English Social Reformers.** The leaders in social reform from mediaeval times to the present, the conditions which led to the reforms, the methods used and the results. Spring, 11:30; S. F.

PHARMACY.

The proper place of drugs and of the dispensers of drugs is a much discussed question in modern medical literature, but with the present increasing tendency toward specialization and toward raising the standard of medical training, it seems certain that the thoroughly efficient and capable pharmacist who keeps pace with the advancement of therapeutic medicine and the allied sciences will become a more and more necessary part of the medical profession.

The efficiency of the pharmacist is, however, an all important point. The registered pharmacist should not only be able to fill prescriptions with accuracy and intelligence, but he should also be able to ascertain the quality and degree of purity of the drugs and chemicals from which the prescriptions are filled. He should further be competent to make for physicians such chemical and microscopical examinations as the latter may have neither the time nor facilities for making. Lastly, the progressive pharmacist should be able to keep pace with the advance which will certainly be made in the pharmaceutical sciences during the coming three or four decades. In order to do this he must not only have a clear and exact knowledge of chemistry and certain branches of the biological sciences, but he must also be thoroughly conversant with one or two modern languages besides English, especially with the language of the sciences, German.

The course in Pharmacy offered at the West Virginia University has been planned to meet the above requirements, and it must be emphasized that no student will be permitted to graduate who has not fulfilled them.

Admission to the Pharmacy Course.

The conditions of admission to the course in Pharmacy are the same as the conditions of admission to the courses leading to the degree of Bachelor of Arts; but no student can complete the course in Pharmacy unless his preparatory work has included nine courses in English, six courses in German, and six courses in Latin. It is expected that the Bachelor of Science in Pharmacy shall be an older and

more mature student than the average college graduate, since his training is not only educational but also professional. Students who expect to take the course in Pharmacy are advised to first complete the following preparatory work:

English,	9 courses;
Latin,	6 courses;
French,	6 courses;
German,	6 courses;
Algebra,	3 courses;
Plane Geometry,	2 courses;
History,	3 courses;
Physics,	2 courses;
Free-Hand Drawing,	2 courses.

These studies can be taken in the Preparatory School.

The Pharmacy Course.

The course in Pharmacy leading to the degree of B.S. in Pharmacy, is to cover four years. It will include the following studies:

German,	3 courses;
Botany,	6 courses;
Zoology,	3 courses;
Physiology,	3 courses;
Bacteriology,	1 course;
Chemistry,	12 courses;
Materia Medica,	3 courses;
Pharmacagnosy,	1 course;
Theoretical Pharmacy,	3 courses;
Electives,	3 courses;
Thesis,	1 course;
Study of current scientific literature,	3 courses.
	42 courses.

Pharmacagnosy.

A course will be given in the recognition of crude drugs, the varieties and sources of the substances used as medicines, and the detection of adulterations. The drug cabinet contains about two hundred selected specimens of crude drugs as bark, seed, leaf, root, gum, etc., and this will be enlarged as required. Constant study of the dispensatory, trade lists, and drugs as they occur in commerce, will train the student in the actual work of drug sampling and buying.

Theoretical and Practical Pharmacy.

Constant study of the best American and German Pharmacopoeias and the best pharmaceutical literature will be required throughout

these courses. The laboratory work will be entirely individual and will consist of such strictly pharmaceutical work as the students have not learned in the courses in pure Botany and Chemistry. The analysis of drugs, the preparation of medicines from crude drugs, the filling of prescriptions, etc., will take up all time that can be spared for such purposes throughout the last year, and aside from the regular hours, the laboratory will be open to the students of Pharmacy during the afternoons for such work.

Theses.

During his college course, the student of Pharmacy is expected to acquire some facility in reading critically the current literature (English, French, German) which has direct bearing upon theoretical and practical Pharmacy. As evidence of sufficient maturity in this work, the student will be required to produce before graduation a thesis on some pharmaceutical subject. This thesis must contain an adequate review of the work of previous investigators and the report of personal investigations on the subject. The thesis will count as one full course, and the student is expected to give to the investigations not less than four hours laboratory work per week during each of the last two quarters before graduation.

FINE ARTS.

Mrs. Hubbard and Mr. Leonard.

The University provides a large, well lighted studio, containing drawing stands, easels, etc., and a large collection of casts and models. Students also have access to the University Museum for study, and to the University Library for works on the history and development of art.

The regular classes in Drawing and the History of Art are open without charge to all students of the University, but in the Crayon and Painting classes moderate fees are charged as follows:

For One Quarter (Twelve Weeks), Three Lessons Weekly:

Special Drawing	$5.00
Crayon	5.00
Water-Color	8.00
China Painting	8.00
Oil Painting	9.00
Pastel Painting	9.00

Students whose work is all in this department and who take only private work are not required to pay the usual University fees, but are entitled to all the privileges of the other University students—Library, lectures, etc. Fees are payable in advance to the Treasurer of the University, for the Art Fund.

Mr. Leonard.

1. **Elementary Drawing.** The historic forms of Art and their development. Lectures, with collateral reading and practice in drawing. Fall, 9:30; 12 S.

2. **Elementary Drawing.** A continuation of Course 1. Winter, 9:30; 12 S.

3. **Elementary Drawing.** A continuation of Course 2. Spring, 9:30; 12 S.

4. **Advanced Drawing.** Historic periods of Architecture, Sculpture, and Painting. Lectures, with collateral reading and practice in drawing. Fall, 10:30; 12 S.

5. **Advanced Drawing.** A continuation of Course 4.

Winter, 10:30; 12 S.

6. **Advanced Drawing.** A continuation of Course 5.

Spring, 10:30; 12 S.

7. **The History of Greek Art,** with a consideration of the arts of Egypt, Assyria and Phoenicia, in their relation to Greek Art.

Fall, 8:30; 18 U.

8. **The History of Mediaeval and Modern Art,** with special consideration of the Renaissance period. Winter, 8:30; 18 U.

Courses 7 and 8 are not open to Freshmen.

Mrs. Hubbard.

9. **Perspective Drawing.** Elementary study of Linear Perspective. Principles studied and applied to the drawing of geometrical forms and familiar objects. Text-book, Honey's "Linear Perspective."

Fall, 11:30; 12 S.

10. **Perspective Drawing.** A continuation of Course 9. Analysis of principles. Development and construction of the arch. Minifie's and Spanton's "Perspective." Winter, 11:30; 12 S.

11. **Advanced Perspective Drawing.** A continuation of Course 10. Isometric drawing. Sciography. Perspective applied to buildings. use of plan and perspective erections. Applications to sketching and topography. Reference books: Spanton and Ware. Spring, 11:30;12 S.

12. **Oil Painting.** Color analysis and combinations. Painting from still life, fruits, flowers, draperies, etc. Landscape painting. Study of the draped model. Hours to be arranged. 12 S.

13. **Pastel Painting.** The various studies of color and design suitable for expression in this medium. Special study for pastel portraits and the draped figures. Hours to be arranged. 12 S.

14. **Water-Color Painting.** Study from the flat and from nature, still life, landscape or model. Design from plant life and conventional. Figure and portrait painting. Hours to be arranged. 12 S.

15. **China Painting.** Study of colors and combinations. Painting from the flat. Study of design of flowers, landscapes, etc., leading to original designs. China burned in the studio kilns.

Hours to be arranged. 12 S.

The Regular Art Course.

This course of four years is so planned that the student may acquire not only the technique of drawing and painting, but also a general art education and a degree of aesthetic culture tending to develop individual powers of composition and art expression.

The work of the first year includes light and shade drawing from the antique, study of perspective, sketching from nature, drawings of still life, and study of form carried out in clay modeling.

The second year continues the drawing from cast in charcoal and crayon, copying the head, mask and ornament from the antique. Color studies in water-colors and oil are given alternating with the work in black and white.

During the third and fourth years the student copies the bust and full-length figure from the antique, paints from the draped model in the life class, and studies portrait painting and composition or sketching from nature and landscape painting.

Class lectures are given upon perspective, anatomy, composition, and art history. To those taking this course studio privileges for practice and special study will be given. The course includes painting in oil, water-color, pastel or china paints.

The Normal Art Course.

This course is designed for teachers in public or normal schools. It comprises free-hand drawing of ornament, mask, and head from the antique; study of still life; perspective and mechanical drawing; sketching; study of design; study of color and form developed in water-color painting and clay modeling.

Class lectures are given on the teaching of form and color, and the history of art.

Students should spend two years in pursuing this course; but to suit individual needs, the course may be shortened, and what is most essential will be given in the time available.

THE COLLEGE OF ENGINEERING AND MECHANIC ARTS.

Staff of Instruction.

The Faculty.

DANIEL BOARDMAN PURINTON, L.L.D., President.

JOHN LINDSAY JOHNSTON, C.E., Professor of Civil and Mining Engineering.

FREDERICK LINCOLN EMORY, B.S., M.M.E., M.E., Professor of Mechanics and Applied Mathematics.

CLEMENT ROSS JONES, M.M.E., Professor of Mechanical Engineering.

RUSSELL LOVE MORRIS, C. E., Assistant Professor of Civil and Mining Engineering.

RUFUS A. WEST, Assistant in Metal Working and Stationary Engineer.

THOMAS HOWARD CATHER, Foreman of Machine Shop.

ASHBEL FAIRCHILD, Foreman of Wood Shop.

Other Instructors Giving Courses in this College.

ALEXANDER REID WHITEHILL, Ph.D., Professor of Chemistry.

JAMES SCOTT STEWART, M.S., Professor of Mathematics.

SAMUEL B. BROWN, A.M., Professor of Geology and Mineralogy.

THOMAS EDWARD HODGES, A.M., Professor of Physics.

FREDERICK WILSON TRUSCOTT, Ph.D., Professor of Germanic Languages and Literatures.

CHARLES CHOLLET, A.B., Professor of Romance Languages and Literatures.

FREDERICK LAWRENCE KORTRIGHT, D.Sc., Assistant Professor of Chemistry.

EVA EMMA HUBBARD, Instructor in Drawing.

WILLIAM JACKSON LEONARD, Instructor in Fine Arts.

WILLIAM HENRY WHITHAM, A.M., Assistant in Physics and Geology.

Organization.

This College comprises the following departments:

Civil and Mining Engineering;
Mechanical Engineering and the Mechanic Arts;
Mechanics and Applied Mathematics.

The requirements for admission and graduation and the arrangement of the courses of instruction, and such other work as pertains to this College, are provided for by its Faculty, in conjunction with the University Council.

Equipment and Facilities for Instruction.

Before the close of the current year the various departments of this College will be fully installed in the new Engineering Building, where all instruction in engineering is to be centralized. This building has been erected to replace the old Mechanical Hall, destroyed by fire in 1899, and, in addition, to meet the growing demands of the departments of Civil and Mining Engineering formerly located in Science Hall, and the department of Mechanics and Applied Mathematics which has heretofore occupied a portion of Martin Hall. The Chemical, Metallurgical, Physical and Geological laboratories are still located in Science Hall.

The new building consists of a one-storied portion in which are the boiler room, power plant, forge shop and foundry, and a main building of three stories, one wing of which is devoted to the machine and wood shops, and the remainder to class room and laboratory instruction. The drawing rooms, shops and laboratories are being equipped as rapidly as possible with the most modern apparatus and machinery and have sufficient floor space to provide for the growth of several years.

The engineering students have at their command a large and varied collection of apparatus and instruments, of tools and machinery, of stock and material, which is being judiciously increased from year to year. In the drawing-rooms are collections of models of bridges, furnaces, structures, mechanisms; engines, pumps, valves and valve gear; plaster casts and descriptive geometry models; sets of charts, State and Government maps, surveys, photographs, engineering specifications, drawings, tracings and blue prints.

In the workshops are bench and machine tools and workshop appliances for working wood and metal, with a selected variety of measures, gauges, small tools, stock and material.

The engineering laboratories are fitted with standard gauges and measures, calculating and recording instruments, with apparatus and appliances for qualitative and quantitative experimental work in civil, mechanical, steam, hydraulic and electrical engineering. The boilers, engines, pumps and condensers from the old Mechanical building have been repaired and installed in the new building. A new 50-horse-power two cylinder Westinghouse gas engine direct connected to a 37½ K.W. Westinghouse direct current generator, furnishes the power for the shops and laboratories, and new motors, electrical machinery and other motive power machinery of modern type have been especially selected and arranged for experimental work in mechanical and electrical engineering. The passenger locomotive donated by the Baltimore & Ohio Railroad Company has been placed in the power plant and will be mounted so as to provide practical instruction in railway engineering.

The latest trade literature, catalogues and reports of commercial developments in engineering are kept in classified files for students' reference. The University Library has a thoroughly classified and indexed collection of the standard and latest books in engineering and the allied sciences, complete bound sets of the transactions of several scientific and engineering societies; and current issues and bound volumes of the principal scientific and technical periodicals.

The regular and special courses offered by this College are designed to meeet the requirements of the technical and professional lines of work leading to the engineering degrees indicated and to active professional work.

Methods of Instruction.

In the classroom instruction is given by lectures, combined with text-book study and recitation. Engineering problems and subjects are assigned to be worked out in the library or drawing-room, in the field, the shop or the laboratory. The several lines of work in any given study are co-ordinated so far as possible, as noted in schedules of this College. In this way time is economized. The student concentrates his attention, focalizing it upon the particular question, problem or project in hand. The classroom instruction is supplemented throughout by practical work in the field and drawing-room, shops and engineering laboratory. Visits of inspection to industrial establishments and power plants are made whenever it is possible to arrange for them.

The method of instruction in Manual Training and the Mechanic Arts is largely that of the shop exercise system, by which the student

is familiarized with the fundamental operations of constructive mechanics. Later on such instruction is combined with the work of construction of machine elements, tools and apparatus. Attention is given to the economics of time and material by use of the shop-order system in accounting for the same.

In engineering drawing and designing the work is carried along with the study of actual typical details of structural elements, and, where possible, parallel with the construction of similar elements or exercises in the laboratories and mechanical shops. Frequent reference is made to models, to blue prints of engineering structures and to existing work in the institution or elsewhere. An opportunity is also afforded for the necessary graphical treatment of engineering problems arising in lectures and the classroom instruction of any quarter.

Lectures, field practice, mimeograph notes, collateral reading, conference work and sketching accompany all the practical lines of work.

In Experimental Engineering, the students are required to make scientific observations, keep records of tests, facilitate deductions therefrom by the use of calculating instruments, tabulate and plot results and make reports upon the test in due form. Each member of the class is required to use and to become familiar with all the instruments and apparatus of any given course. The classes are divided into groups of three or four students and furnished with mimeographed notes and forms.

Requirements of Admission to Engineering Courses.

The conditions for admission to the regular four years engineering courses are as follows:

Algebra,	4 courses;
Plane and Solid Geometry,	3 courses;
Physics with laboratory,	2 courses;
Chemistry with laboratory,	3 courses;
English,	9 courses;
Foreign Language,	6 courses;
History,	2 courses;
Free Hand Drawing.	2 courses;
Total,	31 courses.

The following substitutions may be made. One year of ancient language may be substituted for one year of modern language. One

year of modern language may be substituted for one year of Chemistry, the Chemistry to be taken in the freshman year.

For a description of the above prescribed preparatory courses see "Entrance Requirements" for the College of Arts and Sciences, on a previous page of this catalogue.

Admission to Special Courses.

Students under twenty-one years of age desiring to take special courses in the College of Engineering and the Mechanic Arts are required to present the same qualifications as candidates for one of the regular courses in this College. Students twenty-one years of age or over who are not candidates for an Engineering degree, but who wish to pursue special studies along engineering lines, will be permitted to do so upon giving satisfactory evidence that they are prepared to take the desired studies advantageously; but if they subsequently desire to become candidates for a degree or to take a regular course in engineering they must pass the required entrance examination for that year.

Admission to Advanced Standing.

Students from other institutions will be admitted to advanced standing upon the same conditions under which students of this University are allowed to advance, namely:

A student to be registered as a Freshman must not be more than three courses behind his class; to be registered as a Sophomore, Junior or a Senior he must have completed the required work of his course, including entrance examinations up to the beginning of the preceding year; and if a Sophomore, must not be more than three courses, or, if a Junior or a Senior, not more than two courses behind his class.

No student can be admitted as a candidate for either of the baccalaureate degrees in Engineering after the beginning of the fourth year.

Engineering Courses Offered in this College.

The following degree courses are offered:

1. A four years undergraduate course leading to the degree of Bachelor of Science in Civil Engineering;

2. A four years undergraduate course leading to the degree of Bachelor of Science in Mechanical Engineering;

3. A four years undergraduate course in Electrical Engineering,

leading to the degree of Bachelor of Science in Mechanical Engineering.

4. A graduate course leading to the degree of Civil Engineer;

5. A graduate course leading to the degree of Mechanical Engineer;

The following special courses are offered:

1. Groups of elective courses for Bachelor of Arts students taking work in engineering subjects.

2. Special courses in Civil. Mechanical, and Electrical Engineering, for students who do not desire an engineering degree.

3. Special courses in Manual Training for teachers.

4. Special courses in the Mechanic Arts for artisans, mechanics, apprentices, stationary engineers, electricians, etc.

GENERAL DESCRIPTION OF ENGINEERING COURSES.

Undergraduate Courses in Engineering.

These four years courses lead respectively to the degrees of Bachelor of Science in Civil Engineering and Bachelor of Science in Mechanical Engineering. They consist of the prescribed courses detailed below under the heading "Requirements of Courses." Undergraduates in this College, however, are allowed to specialize in those branches permitting a certain amount of specialization, but they may not take less than three nor more than four courses in any one quarter.

The object of these courses is to enable young men who have pursued successfully the prescribed studies to enter upon the proper development of the professional work with intelligence and well directed application. Fundamental training is given in the arts and sciences of engineering. Academic courses are provided containing the elements of a liberal education. These form the best preparation for future professional work and constitute the proper foundation upon which one may build successfully his professional career and reputation. Thorough technical and practical instruction follow—training a student to meeet the demands and to discharge faithfully the duties of his early engineering work, enabling him to keep pace with engineering progress and to prepare to meet the obligations of responsible work later in his career..

Graduate Courses in Engineering.

These lead to the professional degrees of Civil Engineer and Mechanical Engineer, respectively. They consist of eight advanced engineering courses and a thesis, and require one year (three quarters) of resident study and work at the University.

Candidates for these professional degrees are required to have completed the prescribed four years course of undergraduate study in that department of this College in which they propose to take a degree, or to have completed such a course or its equivalent at some other institution of recognized standing conferring the same or an equivalent baccalaureate degree. In this case the diploma and other certificates of proficiency should be presented.

Special Engineering Courses.

Deserving young men who have not the time or are otherwise unable to take the full course, will be allowed to take a special or partial course, consisting of such studies as they are prepared to take up, provided that such partial course shall have been approved by their class officer.

These consist of groups of electives for Bachelor of Arts students, and for special students taking work in engineering subjects. The latter are especially designed for surveyors, manual training teachers, and for others who are equipping themselves for some particular field of engineering, commercial, or industrial work.

These lines of work afford opportunity for specializing in the undergraduate departments of the Engineering College. Students who do not propose to take a full course leading to a degree in Engineering may, nevertheless, be quite fully prepared to take up certain lines of profitable study and work during their residence at the University.

Theses.

Every candidate for a baccalaureate or graduate degree in Engineering will be required to prepare a thesis on some subject relating to a special branch of engineering or other department of applied science. The thesis must be either a design or a review of some machine, structure or process belonging to some department of scientific investigation. It must be fully elaborated and accompanied by the necessary working drawings or models required for the proper elucidation of the subject of the thesis.

With its accompanying drawings it will be presented first to the professor under whose guidance it has been prepared. It must be

accepted by the head of that department in which the degree is to be conferred and approved by a special committee appointed for that purpose. A typewritten copy of the thesis, prepared according to the official specifications for theses, must be placed in the University Library before graduation.

Engineering Society.

The Engineering Society is organized in connection with the Engineering departments. It is conducted by the students of these departments, and meets once a week. Its object is the investigation and discussion of scientific subjects. All engineering students are requested to join this organization and perform such work as its rules require. Students taking either of the four-year courses leading to the baccalaureate degrees in Engineering are expected to engage actively for three years in the work of the Society.

Undergraduate Course in Civil and Mining Engineering.

This is a four years course leading to the degree of Bachelor of Science in Civil Engineering. It has been planned with a view to laying a broad and substantial foundation for the general and technical knowledge needed by practitioners in civil engineering; so that graduates, guided by their theoretical education, and the practical training they may get during the course, may find profitable employment in the line of their profession and develop into useful investigators and scientific constructors.

The work of the students is based upon an extended course on the Mechanics and Economics of Engineering. The object aimed at is to give as thorough a preparation as possible for the general purposes of the profession in the following subjects: The survey, location and construction of railroads, tramways, elevated railroads, tunnels and aqueducts; the design and construction of girder, truss and suspension bridges, of towers, roofs and arches of stone and iron; hydrographical and topographical surveys of rivers and harbors, coast and geodetic surveys: the determination of latitude and longitude and the location of true meridians; the projection of maps, the construction of working drawings, plans and specifications of various engineering structures; the design and construction of machines and the determination of their efficiency; the tests and selection of the materials of engineering; the design and construction of metallurgical works; the surveys of water works, canals, levees, revetments and retaining walls; the construction of coke ovens and the design of coal and coke plants; the construction and superintendence of power and power plants; the

economic theories of railroad location and construction, track work and the maintenance of way of railroads; the design and construction of hydraulic motors, and a course of instruction in mining, especially adapted to the coal and ore mining peculiar to West Virginia.

Requirements for degree of Bachelor of Science in Civil Engineering:

Trigonometry	1 course;
Higher Algebra	1 course;
Analytical Geometry	1 course;
Differential Calculus	1 course;
Integral Calculus	1 course;
Electrical Engineering	1 course;
Mechanics	3 courses;
Descriptive Geometry	2 courses;
German	3 courses;
Projection Drawing	1 course;
Geology	3 courses;
Physics	4 courses;
Land Surveying	1 course;
Analytical Chemistry	1 course;
Railroad Surveying	1 course;
Railroad Construction	1 course;
Roads, Streets and Pavements	1 course;
Topographical and Mine Surveying	1 course;
Mechanical Drawing	3 courses;
Metallurgy or Mineralogy	1 course;
Eng. Testing Laboratory	1 course;
Hydraulics	1 course;
Power	3 courses;
Woodworking	1 course;
Stereotomy	2 courses;
Roofs and Bridges	1 course;
Bridge Design	1 course;
Masonry Construction	1 course;
Municipal and Sanitary Engineering	1 course;
Railroad Economy	1 course;
Materials of Engineering	1 course;
Mining Engineering	½ course;
Engineering Jurisprudence	½ course;
Thesis,	1 course.
Total	48 courses.

Students who wish to specialize along the lines of Chemistry, Physics, Mining Engineering, Hydraulics, Structural design or Electrical Engineering, will be allowed to do so, under the following conditions, viz.: No substitution or election will be allowed before the beginning of the third year. Any student desiring to so specialize must prepare a list of the studies he wishes to substitute or elect, and a scheme of the work proposed, which must be approved by the head of the department and the Committee on Classification and Grades, and filed with the registrar.

Distribution of the Work for the Degree of B. S. C. E.

FIRST YEAR.

HOUR.	FALL.	WINTER.	SPRING.
8:30	German 4	German 5	German 6
9:30	Project. Draw. 1-2	Project. Draw.1-2	Land Surveying
10:30	Trigonometry	Anal. Geom.	Algebra 5
11:30	Geology	Geology	Geology
1:30	Woodworking	Woodworking	Woodworking

SECOND YEAR.

8:30	Diff. Calculus	Integral Calc.	Mechanics
9:30	Physics 6	Physics 7	Physics 8
10:30	Mech. Draw. 2-3	Mech. Draw. 2-3	
11:30	Descrip. Draw.	Desc. Draw.	Top. and Min. Surveying
1:30	Anal. Chem. 1-3	Anal. Chem. 1-3	Field Prac. 1-3

THIRD YEAR.

8:30	R. R. Surveying	R. R. Construct'n	Rds. & Pavem'ts
9:30	Mechanics 4	Mechanics 3	Hydraulics
10:30	Mineralogy or Metallurgy	Physics 17; D.C. Machinery.	Physics 18; A.C. Machinery.
11:30			Masonry Const.
1:30	Testing Lab. 1-3 Mech. Draw. 1-2	Testing Lab. 1-3 Mech. Draw. 1-2	Testing Lab. 1-3

FOURTH YEAR.

8:30	Power 5	Power 6	
9:30	Roofs and Bridges	Bridge Design	Power 7
10:30	Stereotomy	Stereotomy	Eng. Jurisprud.
11:30	Sanitary and Min. Eng.	Mat. of Eng.	R. R. Economy.
1:30	Thesis throughout the year		

NOTE.—One-third of a course means five hours per week in draughting room or laboratory for one full term. One-half course means daily recitations for six weeks.

Undergraduate Course in Mechanical Engineering.

This is a four years course leading to the degree of Bachelor of Science in Mechanical Engineering. It seeks to develop the principles and to prepare for intelligent work involving the design, selection, cost, construction, installation, testing and management of power generators, prime movers, and machinery for manufacturing, transportation and power transmission; the planning, equipment, cost, construction and management of manufacturing plants, shops, factories, lighting, heating and ventilating.

The departmental equipment has recently been strengthened by the gift of the locomotive previously mentioned. This engine, in connection with the other new machinery to be installed during the coming year, will afford ample facilities for the study of Railway Mechanical Engineering, in addition to the other courses offered. It is the intention to develop this branch of mechanical engineering as rapidly as possible, but at present the exact nature of the courses to be offered cannot be announced.

Students pursuing this course may elect either the Mechanical or the Electrical alternative of the fourth year, receiving in either case the degree of Bachelor of Science in Mechanical Engineering. After the year 1901-2, it is expected that a fourth year alternative can be offered in Railway Mechanical Engineering. This provision has been made to meet the requirements of those who may wish to specialize in either the steam engineering or the electrical branches of this profession.

Bachelor of Science in Mechanical Engineering.

The degree of Bachelor of Science in Mechanical Engineering will be conferred upon any student who satisfies all entrance requirements and satisfactorily completes the following forty-five and one-half college courses:

French or German	3 courses;
Advanced Algebra	1 course;
Trigonometry	1 course;
Analytic Geometry	1 course;
Calculus	2 courses;
Geology	2 courses;
Analytic Chemistry	1 course;
Physics	3 courses;
Descriptive Geometry	1 course;
Land Surveying	1 course.

Mechanics,	2 courses;
Strength of Materials,	1 course;
Mechanic Arts,	4 4-5 courses;
Mechanism and Machinery,	1 1-5 courses;
Machine Design,	3-5 course;
Mechanical Engineering Designing,	3-5 course;
Drawing and Design,	5 courses
Valves and Valve Gears,	3-5 course;
*Steam Engine Design,	3-5 course;
*Steam Boilers,	3-5 course;
*Dynamos and Motors,	1 3-5 courses;
**Dynamo Electric Machinery,	1 course;
**Electric Lighting,	1 course;
*Hydraulics,	1 course;
Development and Utilization of Power,	2 courses;
Thermodynamics of Engineering,	1 course;
Prime Movers,	3-5 course;
Power Transmission,	1-2 course;
Engineering Jurisprudence,	1-2 course;
Experimental Engineering,	2 1-5 courses;
Thesis,	1 course;
Total,	45 2-5 courses.

*Substitutions permissible for electrical alternative.

**Substitutions permissible, mechanical alternative.

Distribution of the Work for the Degree of Bachelor of Science in Mechanical Engineering.

FIRST YEAR.

HOUR.	FALL.	WINTER.	SPRING.
8:30	German 4	German 5,	German 6
9:30			Land Surveying
10:30	Trigonometry	Anal. Geometry,	Algebra 5
11:30	Geology 3	Geology 4,	
1:30	Mech. Drawing 18 2-5	Mech.Drawing 19 2-5	Mech. Draw.20 2-5
	W. & F.		
1:30	Woodworking 1 and 2, 3-5	Pattern-making 3, 3-5	Foundry 5, 3-5
	T. and Th. and 8:00 S.		

SECOND YEAR.

8:30	Differential Calculus,	Integral Calculus	Mechanics 2
9:30	Physics 6	Physics 7,	Physics 8
10:30			
11:30	Descriptive Geometry,	Mechanism 34 3-5 M., W. and F.	Mechanics 35, 3-5 M.,W.and F.

1:30 T.	Analytical Chemistry 5 and Th.	Anal. Chemistry 6	Anal. Chem. 7
1:30 F.	Mech. Drawing 21, 1-3 (Elective.)	Mech. Drawing 22 2-5	Mech. Draw. 23 2-5
8:00 S.	Forging 4, 1-3	Tin & Pipe W'k 6 1-3	Machine Work 7 1-3

THIRD YEAR.

8:30	Power 11,	Power 12,	Thermodynamics 37
9:30	Str. of Materials 4,	Mechanics 3,	Mach. Design 30 3-5 M.,W.,and F.
10:30 11:30	Valves and Valve Gears,32 3-5 M., W. and F.	D. C. Machinery 3-5, M.,W.,and F.	A.C.Machinery
1:30	Machine Work 8, 2-5 T. and Th.	Machine Work 9 2-5	Mach. Work 10 2-5
1:30 W.	Machine Drawing 24, and F. 2-5	Mach. Draw'g 25 2-5	Mach. Draw'g 26 2-5
8:00 S.	Exp. Mechanics 43, 1-3	Test'g Mater. 45 1-3	Power Measure.44 1-3

FOURTH YEAR.

8:30	Prime Movers 41 M., W. and F.	M. E. Design 33 M., W. and F.	Thesis
9:30	Steam Engine Design 36 3-5 M., W. and F.	St'm Boilers 38 3-5, M., W. and F	Hydraulics
10:30	Dyn. Elect. Mach. 49,	Elect. Lighting 50	Power Transm. 42, 1-2 Eng'g Juris. 1-2
1:30	Drawing and Design 27, M.,W.,and F. 3-5	Draw. & Des'n 28 3-5	Draw. & Design 29, 3-5
1:30 T.	Mach. Const. 13, 2-5 and Th.	Mach. Const. 14 2-5	
8:00 S.	Eng'g Laboratory 46, 2-5	Eng'g Labor. 47 2-5	Eng'g Lab. 48 2-5

Fourth Year. Mechanical Alternative.

The same as the above except that candidates may upon approval of the head of the Department substitute for Mechanical Engineering courses 49, 50 and 51, two elective courses from those offered by the Department of Mechanical Engineering or the Department of Applied Mathematics.

Fourth Year. Electrical Alternative.

Candidates for the degree of B. S. M. E. may upon the approval of the head of the Department, substitute for Mechanical Engineering

Courses 36 and 38, an equivalent amount of electrical work in the College of Engineering or the Department of Physics.

Students in the Mechanical Engineering course who offer Mechanic Arts for admission will elect an equivalent amount of work in place of college Mechanic Arts.

Manual Training Courses.

The first group consists of Courses 1, 2, 3, (Mechanical Engineeering), consisting of shop practice in wood and metal working. The second group consists of mechanical drawing, Courses 21, 22, 23 (Mechanical Engineering), and shop practice in wood and metal working, Courses 1, 2, 3, 4, 5, 6, 7, 8, 9 (Mechanical Engineering). These courses aim to present the simple elements of some of the constructive arts which admit of being developed into a logical series of exercises. Their merit is chiefly educational rather than as possessing any intrinsic value in relation to the several brancnes of handicraft work from which they are taken. The primary object is the training of the eye to see the form of objects, and of the hand to produce such forms in the materials most commonly used in constructive work. At the same time the student is acquainted with the use of the fundamental tools and with the accuracy called for in the production of the elements of construction and of simple combinations of the same in fitting parts of the work together. There is sufficient instruction in handicraft work and practice to form a proper foundation for the more advanced work with machine tools in mechanical construction, and these courses are, therefore, required of all students taking the full course in Mechanical Engineering.

Students who wish to become more proficient in the use of tools or who are preparing themselves for positions as foremen in industrial establishments, may take additional work in the shop in which they wish to specialize. Instruction will be given in the maintenance and repair of machinery, and opportunity will be afforded for the construction of new machines and apparatus for the University, as well as the working up in the shops of original designs which have been approved by the head of the Department. All students in Mechanical Engineering are recommended to take advantage of this provision and devote as much time as possible to shop and drawing-room practice.

DEPARTMENTS OF INSTRUCTION.

Each of the courses of instruction offered by the Engineering departments is known as a full course unless otherwise stated: that is, a course of five class exercises a week for one quarter, or their equivalent in laboratory or other practical work.

The following branches of applied science and engineering are represented in the courses offered by the Engineering departments:

Civil Engineering	Mechanical Engineering
Designing	Metallurgy
Drawing	Mining Engineering
Electrical Engineering	Municipal Engineering
Experimental Engineering	Railroad Engineering
Hydraulic Engineering	Sanitary Engineering
Mechanics	Steam Engineering
Mechanic Arts	Structural Engineering
Applied Mathematics	Surveying

Civil and Mining Engineering.

Professor John L. Johnston and Assistant Professor Morris.

(When no instructor's name is appended to a course, such course will be given by the head of the department.)

Courses for Undergraduates.

1. **Projection Drawing.** Orthographic projections in one quadrant; elementary problems in shades and shadows; isometric and oblique projections. Lectures and recitations. Drawing-room work. Warren's "Industrial Drawing," Part III, and Faunce's "Descriptive Geometry." Assistant Professor Morris. 24 E.

2. **Descriptive Geometry.** Orthographic projections in the four quadrants; problems of the point, line and plane; tangencies and the development of single-curved surfaces. Warren's text-books.
Assistant Professor Morris. 24 E.

3. **Descriptive Geometry.** Single-curved, double-curved and warped surfaces; intersections, tangencies and developments; shades, shad-

ows and perspective. Lectures and recitations. Warren's text-books.
Assistant Professor Morris. 24 E.

4. **Land Surveying.** Theory and practice of land surveying; magnetic variations; calculating the content; retracing old lines; division of lands; establishment of meridians; care and use of instruments; mapping the survey; field practice. Lectures and recitations. Gillespie's "Surveying." Assistant Professor Morris. 24 E.

5. **Railroad Surveying.** Theory and practice of railroad surveying. Lectures, recitations and field work.
Assistant Professor Morris. 24 E.

6. **Topographical and Mine Surveying.** Theory and practice of topographic, hydrographic and barometric surveying, city surveying, etc. Theory and practice of underground surveying. Lectures and recitations. Assistant Professor Morris. 24 E.

7. **Railroad Construction and Maintenance.** Tunnels, trestles, track work, earth work, signalling, graduation, masonry, etc. Tratman's "Track and Trackwork." Asistant Professor Morris. 24 E.

8. **Roads and Pavements.** Location, construction and maintenance; study and comparison of the various types of roads; road-making material. Lectures. Assistant Professor Morris. 24 E.

9. **Mechanical Drawing.** Detail shop drawing. Constructions in Descriptive Geometry. Platting the survey. Thorne's "Junior and Intermediate Courses in Drawing." 30 E.

10. **Mechanical Drawing.** Engineering drawing, detail shop drawing, etc. Laboratory. Thorne's "Senior Course in Mechanical Drawing." 30E.

11. **Mechanical Drawing.** Topographical drawing, working drawings in railroad construction, etc. Thorne's "Senior Course" completed. 30E.

12. **Hydraulics.** Theoretic pressure and energy of water; flow of water through orifices, tubes and weirs; flow in conduits, pipes, canals, brooks, and rivers, current meters, water motors, water wheels and naval hydromechanics. Lectures and recitations. Merriman's "Hydraulics." 26 E.

13. **Stereotomy.** Stone-cutting, plain and decorative. Recitation and laboratory. Warren's "Stone Cutting."
Assistant Professor Morris. 24 E.

14. **Stereotomy.** Stone-cutting; pattern-making; cutting stones in clay. Laboratory. Warren's "Stone Cutting."
Assistant Professor Morris. 24 E.

15. **Roof and Bridge Design.** Determinations of stresses, shears, and bending moments, in various types of roof and bridge trusses by analytic methods. Lectures and recitations. Merriman's "Roofs and Bridges," Parts I. and III. 26 E.

16. **Bridge Design.** Complete designs of the plate girder and the Pratt truss. Recitations, lectures and laboratory. Merriman's "Roofs and Bridges," Parts III. and IV. 26 E.

17. **Municipal and Sanitary Engineering.** Water supply. Purification, etc. Reservoirs, water mains, sewers and drains. House drainage, sewage disposal. 26 E.

18. **Railroad Economy.** General theory of railroad location and construction, from the inception of the project to the completion; effects of grades, curvature and distance on operating expenses and revenue; railroad finance and management. Lectures. 26 E.

19. **General Engineering Construction.** Materials of engineering; foundations; retaining walls; masonry and pile construction, etc. Lectures and recitations. 26 E.

20. **Mining Engineering.** Coal and ore mining peculiar to the bituminous coal regions; the inception, construction and operation of mining plants; the gases of coal mines and their treatment. Lectures and recitations. 26 E.

21. **Metallurgy.** The metallurgy of iron and steel.

22. **Masonry.** Dams, foundations, arches, piers, and abutments. 30 E.

23. **Field Practice.** Practical work in Land Surveying, Railroad, Mine and City Surveying, and topographical surveying. Levelling, and the use of all engineering instruments. Required of Freshmen, Sophomores, and Juniors.

24. **Thesis.** Required of Civil Engineering Seniors.

Courses for Graduates.

Hours to be Arranged.

25. **Bridge Design.** Double trusses; arched upper chords.

26. **Bridge Design.** Suspension, cantilever and swing bridges.

27. **Electrical Engineering.**

28. **Hydraulic Motors.**

29. **Heating and Ventilation of Buildings.**

30. **Masonry.** Dams, foundations, arches, piers, and abutments.

31. **Engineering Drawing and Design.**

32. **Building Superintendence.** Detail study of construction and methods. Half course.

33. **Steel Framed Structures.** Elevated roads, water towers, high buildings, inclines.

34. **Thesis.** One course. Required of candidates for the degree of C.E.

Note.—Candidates for the degree of C.E. will be allowed to specialize on lines of their own choice, subject to the direction and approval of the Professor of Civil and Mining Engineering.

Mechanical Engineering and the Mechanic Arts.

Professor Jones, Mr. West, Mr. Cather and Mr. Fairchild.

Courses for Undergraduates.

1 and 2. **Woodworking.** (1) includes instruction in carpentry, joinery and other bench work; exercises with the fundamental edge tools in soft and hard woods, and in matching, molding, joining and making typical framed work. (2) Woodturning. Comprises the fundamental geometric forms in soft and hard woods; fitting forms of reversed curves; face plate work, chucking, boring, finishing and polishing, and elements of pattern-making. *Three-fifths course, or 9 actual hours per week.

1st section; Fall, Winter, or Spring, Monday, Wednesday and Friday, 1:30.

2nd section; Fall, Winter, or Spring, Tuesday and Thursday, 1:30 and Saturday, 8:00; 21 E.

3. **Pattern-Making.** Applies the foregoing instruction in its relation to patterns for machine construction, considers the types of patterns and usual allowances for draft, shrinkage and finish, with exercises in making patterns of machine elements and other work to be executed in the machine shop. Three-fifths course, or 9 hours per week.

1st section; Fall, Winter, or Spring, Monday, Wednesday and Friday, 1:30.

2nd section; Fall, Winter, or Spring, Tuesday and Thursday, 1:30, and Saturday, 8:00; 21 E.

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*Minimum requirements for regular students. Special students may take as much additional in any branch of machine arts as their time permits.

4. **Forging.** Exercises in drawing out and sizing, forming, welding, jointing and fitting iron; steel forging, tempering, annealing; making typical tools to be used later in the machine shop; manner of working forges; determining quality of iron and steel and strength of the students' welded joints. 4 hours per week.

One-third course. Sophomores; Fall, Saturday, 8:00 to 12:00. Other sections at times to suit convenience of students. 7E.

5. **Foundry.** Molding and casting in connection with pattern-making; selection, preparation and use of molding, facing and parting sands; use of typical molders' tools and appliances; making castings from exercise patterns and from those for machine work.

Three-fifths course. Spring, Mon., Wed. and Fri., 1:30. 8 E.

6. **Tin-Smithing and Pipe-Fitting.** Brazing, tinning, forging, and use of coppers; seamless and solder-jointed work in tin and sheet-iron; laying out, cutting and forming sheet-metal; solder joints for electrical fitting; bending and coiling pipe; making joints and use of packing; drilling and tapping for pipe and bolt-holes in boiler plate; soft and hard patches; tank and boiler riveting, caulking and tube expanding.

One-third course. Winter, Saturday, 8 to 12; 7 E.

7. **Machine Work.** Tool smithing, iron work at the bench, chipping, filing, fitting, scraping, polishing; key-seating; formation of straight-edges, surface-plate. Handwork with machine tools, drilling, tapping. One-third course. Spring, Saturday, 8:00 to 12:00; 11 E.

8, 9, 10. **Machine Tool Work.** A continuation of Course 7. Mechanical Engineering; machine tool work with drill-press, lathe, shaper, planer, emery grinder, and milling machine; production of typical details of machine tools and other workshop appliances.

Each 6 hours per week. Two-fifths course.
Fall, Winter, Spring, Tu., and Thu., 1:30; 11 E.

13 14, 15. **Mechanical Construction.** Reproduction of typical details of steam-engine and other motive-power machinery; work from original designs; manufacture of special apparatus for shop and laboratory use; practice in building, assembling and erecting workshop and engineering appliances, motive-power machinery and accessories, and in attendance on the same. Each 6 hours per week. Two-fifths course. Fall, Winter, Spring, Tuesday, Thursday, 1:30; 11 E.

16. **Electrical Construction.** Mechanical repairs to dynamos and motors, babbitting and boring out bearings, fitting brushes, truing commutators; winding field coils; making switches and rheostats. Elective. Time as assigned.

18, 19, 20. **Mechanical Drawing.** Plain lettering, care and use of drawing instruments, selected geometric constructions, line exercises, finished drawings. Isometric, cabinet, and orthographic projection and perspective. Working drawings from models and blue prints, tracing and blue printing. Mimeographed notes, blue prints. Tracy's "Mechanical Drawing" and "Reinhardt's Lettering."

Each 6 hours per week, or two-fifths course.
Fall, Winter and Spring, Monday, Wednesday, 1:30; 25 E.

21, 22, 23. **Mechanical Drawing.** Drawings of machine parts from sketches, details of mechanical movements and drawings of machine parts worked out in Courses 34 and 35, Mechanical Engineering, respectively. Lectures and drafting. Each 6 hours per week or two-fifths course.

Fall, Winter and Spring, Wed and Fri., 1:30; 25 E.

24, 25, 26. **Machine Drawing.** Drawing-room practice accompanying Courses 30 and 32, Mechanical Engineering, respectively; conventional methods, detail and assembled drawings, tracing and blue printing, chiefly of valve gears and machine parts worked out in the theoretical courses which they accompany. Each two-fifths course.

Fall, Winter, Spring, Wed. and Fri., 1:30; 25 E.

27. **Drawing and Designing.** Drawing-room practice accompanying Course 36, Mechanical Engineering; as far as possible complete drawings of an engine are made from calculations and designs developed in Course 36. Students taking the electrical alternatives are allowed to specialize.

Three-fifths course. Fall, Monday, Wednesday, Friday, 1:30; 25 E.

28. **Drawing and Designing.** Continuation of Course 27 and drawing-room and office work accompanying Course 33, Mechanical Engineering. References made chiefly to blue prints and mechanical drawings of actual power and manufacturing plants.

Three-fifths course. Winter, Monday, Wednesday, Friday, 1:30.

29. **Drawing and Designing.** Continuation of Course 28 and specialized engineering drawing. Prerequisite, Course 28, Mechanical Engineering. Three-fifths course. Mon., Wed., Fri., 1:30; 25 E.

30. **Machine Design.** Elements in machine design, conventional and rational; adaptation of commercial sizes; proportioning fastenings, flanges, bearings, rotating pieces, connecting links and machine supports; machanics of machinery; influence of material and treatment on design. Lectures, recitations and drawing, Course 24. Unwin's "Machine Design;" F. R. Jones' "Machine Design."

Three-fifths course. Spring, Mon., Wed., Fri., 9:30; 16 E.

32. **Valves and Valve Gears.** Comparison of valve diagrams; analysis and design of valves and valve gears. Prerequisite, Course 31. Mechanical Engineering. Lectures, recitations and drawing, Course 25.

Three-fifths course. Fall, Mon., Wed., Fri., 10:30; 16 E.

33. **Mechanical Engineering Design.** Embodies the details of the earlier courses of instruction in Prime Movers and motive-power machinery in respect to the design of steam and electric power and hydraulic plants for power transmission and manufacturing purposes; location of the plant; selection, arrangement, subdivision into units and installation; economics, organization and management of power and manufacturing plants; engineering specifications. Lectures and accompanying Course 28, Mechanical Engineering.

Three-fifths course. Winter, 8:30; 16 E.

34. **Mechanism and Machinery.** Analysis and classification of mechanisms, diagrams and relative velocities of machine parts; principles of transmission and change motions by linkages, rolling contact, toothed gearing, couplings, belt gearings, cams, parallel and straight-line motions; analysis of motions in simple machines. Supplemented by practical applications, Course 27, Mechanical Engineering. Lectures and recitations. Barr's "Kinematics of Machinery."

Three-fifths course. Winter, Mon., Wed., Fri., 11:30; 16 E.

35. **Mechanism and Machinery.** Continuation of Course 34, Mechanical Engineering; classification and analysis of machinery with special attention to work-shop appliances, machine tools and machinery of transmission. Prerequisite, Course 34, Mechanical Engineering. Lectures, recitation and drawing, Course 23.

Three-fifths course. Spring, Mon., Wed., Frid., 11:30; 16 E.

36. **Steam Engine Design.** Comparison of rational and empirical formulae; complete design of simple engine. Supplemented by Course 27, Mechanical Engineering. Lectures and recitations.

Three-fifths course. Fall, Mon., Wed., Fri., 9:30; 16 E.

37. **Thermodynamics of Engineering.** Mechanical theory of heat; thermodynamics of gases and vapors, with special application to steam and other heat engines, air and refrigeration. Prerequisites, Courses 11 and 12, Mechanics. Lectures and recitations. Peabody's "Thermodynamics of the Steam Engine." Spring, 8:30; 16 E.

38. **Steam Boilers.** Heating value of fuels, combustion, economical production of steam; application of theory and practice in the design of steam boilers, chimneys and accessories; steam piping and distribution. Prerequisite, Course 30, Mechanical Engineering. Lectures,

recitations and drawing, Course 28, Mechanical Engineering. Peabody & Miller's "Steam Boilers."

Three-fifths course. Winter, Mon., Wed., Fri., 9:30; 16 E.

39. **Heating and Ventilating.** Principles, comparative merits and design of the various systems of ventilating, heating by hot air, hot water, steam and electricity. A careful study of the systems in the different University buildings. Prerequisite, Course 4, Physics. Lectures and recitations. Carpenter's "Heating and Ventilating Buildings." Elective. Time to suit convenience of students.

41. **Prime Movers.** Expansive working of steam, principles of design, construction and operation of steam engines, pumping engines, motive-power machinery, turbines, hydraulic motors and machinery. Prerequisite, Courses 31 and 34, Mechanical Engineering. Lectures, recitations and laboratory, Course 46, Mechanical Engineering.

Three-fifths course. Fall, Mon., Wed., Fri., 8:30; 16 E.

42. **Power Transmission.** Generation, transmission, distribution of electric power; comparison with other systems; economics of location, selection, arrangement, subdivision into units and installation of steam and electric power. Lectures and accompanying Course 48, Mechanical Engineering. Spring, 10:30; 16 E.

43. **Experimental Mechanics.** The comparison of experimental results and determination of physical laws from observation; theory, calibration and use of slide rule and instruments for the measurement of length, area, volume, weight, power, speed, and pressure; experimental work in kinematics, statics, dynamics, mechanisms and machinery. Prerequisite, or accompanying Course 2, Mechanics. Carpenter's "Experimental Engineering."

One-third course. Fall, Saturday, 8:00 to 12:00; 1 E.

44. **Power Measurements.** Efficiency tests of simple engines, pumps, dynamos, motors and machinery of power transmission; measurements of power by Prony brake, rope brake, Alden absorption dynamometer, transmitting dynamometer; steam-engine indicator practice and simple valve setting; determination of the quality of steam. Prerequiste or accompanying Course 12, Mechanics.

One-third course. Spring, Saturday, 8:00 to 12:00; 10 E.

45. **Testing Materials of Engineering.** Tensile, compressive, and transverse tests of wrought iron, cast iron, steel and timber; transverse, compressive and absorption tests of stone and brick; tensile, compressive, specific gravity and absorption tests of cement; also tests for fineness, time of setting and constancy of volume; testing lu-

bricating value of oils, including composition, viscosity, specific gravity, flash and burning tests, cold test and coefficient of friction. Prerequisite or accompanying Course 4, Mechanics.

One-third course. Winter, Saturday, 8:00 to 12:00; 1 E.

46. **Mechanical Engineering Laboratory.** Experimental work in thermodynamics, tests of thermometers, indicators, injectors, calorimeters, steam and oil separators, non-conducting coverings, flow and quality of steam, coal calorimetry, analysis of chimney gases; practice in valve setting, behavior of steam in the cylinder; or such other work as may be assigned. Prerequisite, Course 37, Mechanical Engineering.

Two-fifths course. Fall, Saturday, 8:00 to 12:00; 10 E.

47. **Mechanical Engineering Laboratory.** Economy tests of simple and multiple expansion working of the steam engines, condensing and non-condensing; steam boilers, fired with gas and coal; steam heating apparatus; duty trials of steam pumps; efficiency tests of hydraulic motors, fans, blowers, etc.; application of Hirn's analysis to the steam engine; flow of water through pipes and orifices, calibration of water meters. Two-fifths course. Winter, Sat., 8:00 to 12:00; 10 E.

48. **Mechanical Engineering Laboratory.** Combined tests of performances of boilers, engines and electrical and other power transmission machinery; testing of plants away from the University when opportunity affords; special research work. Prerequisite 47, Mechanical Engineering. Two-fifths course. Spring. Time as assigned.

49. **Dynamo-Electrical Machinery.** Principles of design, construction and operation of dynamos, motors and transformers. Prerequisite, Course 17, Physics, and to accompany Course 52, Mechanical Engineering. Jackson's "Electro-Magnetism and the Construction of Dynamos," and "Alternating Currents and Alternating Current Machinery." Fall, 10:30; 16 E.

50. **Electric Lighting.** Principles of design, construction, installation and operation of electric-lighting systems; electrical distribution for lighting circuits; manufacture, care and use of arc and incandescent lamps. Prerequisite, Course 17, Physics, and to accompany Course 53, Mechanical Engineering. Crocker's "Electric Lighting."

Winter, 10:30; 16 E.

51. **Electric Railroads.** Principles of design, construction, installation, operation and management of electric railway machinery and electric railroad systems, and distribution for railway circuits. Prerequisite, Course 17, Physics, and to accompany Course 53, Mechanical Engineering. Bell's "Power Distribution for Electric Railroads."

Half course. Time to be arranged. 16 E.

52, 53. **Electrical Engineering Laboratory.** Practical management of electrical machinery; coupling generators; calibration of electrical engineering measuring instruments; switch-board tests; determination of efficiencies and characteristics in laboratory and commercial tests of dynamos and motors; comparison methods; investigation of losses; location of faults; testing arc and incandescent lighting circuit. Prerequisites, Course 17, Physics, and Course 44, Mechanical Engineering. To accompany Courses 49, 50 and 51, Mechanical Engineering. Time to be assigned from same. Parham & Shedd's "Shop and Road Testing of Dynamos and Motors." Fall, Winter. 4 E.

54. **Thesis.** Required of candidates for the degree of Bachelor of Science in Mechanical Engineering. Conference work. Spring, 8:00.

Courses for Graduates.

Hours to be Arranged.

55. **Steam Engineering.** Prerequisites, Courses 37, 38, 41, Mechanical Engineering.

56. **Electrical Engineering.** Prerequisites, Course 17, Physics, and Course 49, Mechanical Engineering.

57. **Mechanical Engineering Design.** Prerequisite, Course 33, and to accompany Course 55, Mechanical Engineering.

58. **Machinery and Mill Work.** Prerequisite, Course 31, Mechanical Engineering. Elective for Seniors. Fall.

59. **Marine Machinery.** Prerequisite, Course 41, Mechanical Engineering. Elective for Seniors. Winter.

60. **Materials of Engineering.** A study of the various materials used in engineering, the source, manufacture, qualities, costs, etc. Hour to be arranged. Prerequisite, Mechanics 4.

61. **Mechanical Engineering Laboratory.** Prerequisites, Courses 46. 47, 48, and to accompany Course 55, Mechanical Engineering.

62. **Mechanical and Electrical Engineering Laboratory.** To accompany Course 56, Mechanical Engineering.

63. **Mechanical Engineering Practice.** Lectures.

64. **Thesis.** Required of all candidates for the degree of Mechanical Engineer.

Mechanics and Applied Mathematics.

Professor Emory.

1. **Elementary Mechanics.** The principles of rational mechanics treated without the calculus and from the physical standpoint. For

students pursuing certificate Electrical course and those preparing for the work of the artisan, foreman or draughtsman. Prerequisite, Trigonometry. 2 M.

2. **Statics.** A study of the composition of forces, polygon of forces, magnitude and resolution, equilibrium of concurring forces, resultants of parallel forces both by analytical and graphical methods, moments of forces, couples, equilibrium of non-concurrent forces, center of gravity and moment of inertia by analytical and graphical methods, and the stability of structures, the stresses in framed and jointed constructions. Prerequisite, the calculus. Spring 8:30; 2 M.

3. **Applied Mechanics.** Strength of Materials. Resistance and elasticity of materials, pipes, cylinders, and riveted joints, cantilever and simple beams, tension and compression, resiliance, shear and torsion, strength of timbers, iron, steel, stone, cement, elastic limits of materials, factors of safety. Design of simple structures. Prerequisite, Course 2. Fall, 9:30; 2 M.

4. **Kinetics.** Laws of motion, motion in vacuo and in resisting medium, central forces, centrifugal force, the pendulum and governor, impulse, work, energy, power, modulus of machines, kinetic energy of revolving masses, work of variable forces, Simpson's rule, duty of engines, impressive forces, motion of rigid bodies, fly wheels, conservation and dissipation of energy, D'Alambert's principle and Euler's equation. Prerequisite, Course 3. Winter, 9:30; 2 M.

5. **Development and Utilization of Power.** Lecture course. A study of the history of the development of the modern pumping engine, railroad locomotive, naval and stationary steam engine, with illustrations, and descriptive study of the accessories of such generators. Course arranged for general arts stuaents as well as for engineering students. Required of engineering students, optional for sophomores or seniors. Fall, 8:30; 2 M.

6. **Development and Utilization of Power.** Lecture course. History of the development and present practice in the use of pumps, heaters, condensors, economizers, purifiers, pipe connections, chimneys, boilers, and all other accessories for steam plants, hot air, gas engines, oil engines, wind and hydraulic engines, binary vapor engines, air compressors, and other sources of power. Prerequisite, Course 5. Winter, 8:30; 2 M.

7. **Development and Utilization of Power.** Text book course. Mathematical study of power, the Clausius, Rankine and physical methods of analysis of power development, measurement of power,

thermodynamics of perfect gases and of vapors, of gas engine and steam cycles, computation of the size and efficiencies of generators, and a complete calculation for power plant to perform some special work, such as water supply, coal handling or other mining operation, etc. Required of Engineers. Prerequisite Courses 4 and 6.

Spring, 9:30; 2 M.

8. **Development and Utilization of Power.** Advanced course in Power, study of the economical development of power and designing of power generators from standpoint of the owner. For graduates. 2 M.

9. **Consulting Engineering and Industrial Plants.** Engineering problems ensemble and in detail, net estimates for installation and economical management and the study of industrial plants from the standpoint of the manufacturer. Economics of manufacturing, systems of labor and costs. For graduates. 2 M.

10. **Materials of Engineering and Construction.** Seminary course in the study of the various materials used in engineering, architecture, and manufactures, their occurrence, modes of treatment, uses, costs, efficiency, etc. For engineers and others having preparation. 2 M.

11. **Building Superintendence and Architectural Engineering.** Construction and inspection of foundations, stone, cement, brick work, iron and steel work, carpentry and mill work, roof trusses, roof coverings, cage construction and veneer work for high buildings, preservation of iron work, fire proofing, plastering, inspection of gas fitting, electric wiring, systems of heating and ventilating, etc. For seniors and graduates. 2 M.

12. **Applied Mathematics.** A special course for those making mathematics their major and those who desire a study of its applications to mathematical instruments and appliances and to the methods of analysis. An application of the calculus to mechanics and physics and to exact measurements. Prerequisite, integral calculus. One-half course may accompany course 17. 2 M.

13. **Mathematical Theory of Heat or Theoretical Thermodynamics.** Study of heat following the methods and theories of Clausius and Rankine. Half course. Prerequisite, Calculus. 2 M.

14. **Mathematical Theory of Electricity.** Mathematical theory of the alternating current, direct current, condensers, transformers, motors, etc. For seniors and graduates. Prerequisite, Calculus and Physics. 2 M.

15. **Hydraulics.** Static pressures, centers of pressure, flow of water through orifices, pipes, tubes, air veins, dams and in canals,

rivers, etc., current meters, energy of water, water wheels and motors, hydraulic power plants, hydraulic machinery, hydraulic shop and engineering appliances. 2 M.

16. **Water Power Engineering.** Development of natural water powers, storage dams, power houses, transmission of generated power and utilization. Seniors and graduates. 2 M.

17. **Method of Least Squares.** Errors of observations; principles of probability, weights of observations, principle of least squares, probable errors of observations, correction of observations, normal equations, empirical formulae. Seniors and graduates. Prerequisites, Physics and Calculus. 2 M.

18. **Differential Equations.** Study of the differential equation of the first order and first degree, first order and higher degrees, including special applications to mechanical and physical problems. Prerequisite, Calculus. Half course. 2 M.

19. **Differential Equations.** A more extended course than 18 of the differential equation, with more extended applications. Prerequisite, Calculus. 2 M.

20. **Higher Mathematics.** A course in general higher mathematics, including solution of equations, hyperbolic functions, harmonic functions, etc. Prerequisites, Calculus and Differential Equations. For graduates and seniors having preparation. 2 M.

Courses above for which no time is assigned may be taken at any hour and term which will not conflict with the required courses in Engineering.

COLLEGE OF AGRICULTURE.

FACULTY.

DANIEL BOARDMAN PURINTON, LL.D., President.

THOMAS CLARK ATKESON, Ph.D., Dean and Professor of Agriculture.

ANDREW DELMAR HOPKINS, Ph.D., Professor of Economic Entomology.

BERT HOLMES HITE, M.S., Professor of Agricultural Chemistry.

KARY CADMUS DAVIS, Ph.D., Horticulturist.

FREDERICK PHILIP RUHL, D.V.S., Professor of Veterinary Science.

THOMAS EDWARD HODGES, A.M., Professor of Physics.

CLEMENT ROSS JONES, M.M.E., Professor of Mechanical Engineering.

WILLIAM EARL RUMSEY, B.S.Agr., Instructor in Botany.

HORACE ATWOOD, M.S.Agr., Instructor in Poultry Industry.

RUFUS A. WEST, Assistant in Metal Working and Stationary Engineer.

THOMAS HOWARD CATHER, Foreman of Machine Shop.

ASHBEL FAIRCHILD, Foreman of Wood Shop.

THE COLLEGE OF AGRICULTURE.

Aims and Scope.

This College offers to students an education designed to fit them for the business and practice of agriculture, while opportunity and means of culture are also afforded; an education which is, therefore, partly technical and partly cultural. Its object is the training of students to be not only progressive farmers, but good citizens and successful business men as well. In other words, it seeks to provide an education suitable to the needs of rural people.

The technical portion of the courses offered in this College constitutes about one-half of the entire work of the students. In studying these technical subjects, the aim is not so much to teach rules of practice, as to make plain the principles of agricultural science.

"The world is beginning to know that there is a science of agriculture, that the man on the farm is not a mere beast of burden, who has imitatively learned certain routine processes which are sometimes causelessly successful, sometimes causelessly not. The scientific spirit is beginning to permeate the whole body of farmers. They meet together in institutes to compare experiences, to reason from effect to cause, to conform future methods to past deductions. Every mail-bag that traverses the land bears bulletins from scientist to farmer, or letters of information and inquiry from farmer to scientist. Nay, the farmer himself is becoming a scientist. His eyes are opened, he is observing, considering, comparing, experimenting, drawing conclusions. As never before, he is working his brain in co-operation with his hands, and in just proportion his occupation is advancing to the dignity of a profession. His very vocabulary is changing, and he now speaks of protein and carbohydrates in the stead of the light and dark of the moon. And this same training in keenness of induction and deduction he is carrying into his relations with his fellow men, and they are beginning to respect the strength of his logic and the shrewdness of his conclusions."

It is not too much to say that agricultural colleges stand for and explain this whole revolutionary movement, that every farmer, aware of his obligations or not, is carrying out ideas for which he is directly indebted to agricultural colleges, and that these colleges are true to their largest and most beneficent purpose just in proportion to the success of their endeavor to infuse their own scientific spirit into all agriculture.

Students who complete their course in this college are expected to be thoroughly up to date and enthusiastic followers of their chosen profession, as well as broadly educated citizens.

Equipment.

The laboratories and apparatus of the scientific departments of the University, and the libraries of the Agricultural Experiment Station and University, are at the command of the students in the College of Agriculture. The farm of the Agricultural Experiment Station, together with its gardens, experimental plats, laboratories and collections, are available for students desiring to acquaint themselves with the practical and scientific methods of conducting agricultural operations, and to investigate scientific questions relating to the progress and development of agriculture.

The farm is equipped with barns, stables, and other buildings, and presents a variety of soils and conditions existing upon many of the

farms of the state. Upon this farm are kept different varieties of farm animals, and the most improved agricultural implements; and facilities are provided for studying the most economic methods of handling live stock and their products, including poultry.

Expenses.

To West Virginia students, tuition is free.

To students from other States, tuition is $12.50 per quarter, (twelve weeks).

The matriculation fee, payable by all students upon entering the University, is $5. Unless a student remains out of the University more than three years, the matriculation fee is paid but once by each student.

The contingent fee, payable by all students, is $2.50 per quarter.

Board and room may be obtained in Morgantown at from $3 to $4 per week.

DEGREE COURSES OF STUDY.

Bachelor of Agriculture.

Entrance Requirements.

Students will be admitted to the Freshman class in this course on completion of twenty-four preparatory courses, of which six courses in English, three in Mathematics, and three in History, are required, and the remaining twelve may be elected.

College Requirements.

This degree will be conferred upon any student who satisfies the above entrance requirements, and satisfactorily completes twenty-four college courses, of which at least twelve are technical courses, announced in the College of Agriculture. The remaining courses may be elected from the courses given in the College of Arts and Sciences.

Bachelor of Science in Agriculture.

Entrance Requirements.

Candidates for this degree will be admitted to the Freshman class on the same conditions as candidates for the degree of Bachelor of Agriculture. Students who have not had the opportunity to make the preparation required for admission, may enter the Preparatory School at the University, and complete their preparation.

College Requirements.

This degree will be conferred upon any student who satisfies the above entrance requirements and satisfactorily completes forty-two college courses, of which at least fifteen are technical courses announced in the College of Agriculture. The remaining courses may be elected from the courses given in the College of Arts and Sciences. The Dean of the College of Agriculture will act as the student's class officer and adviser, and will have authority to require such courses as he may consider necessary or advisable.

Certificate Course.

No entrance requirements are made for this course. A certificate, indicating the work done, will be granted on the completion of this course.

Special One Year Course in Agriculture.

This course consists of twelve courses selected from the technical courses announced in the College of Agriculture. It is confidently believed that many young and middle aged men who are engaged in farming, or expect to become farmers, will find it greatly to their advantage to devote one school year to this course, if for any reason they cannot give the time necessary to complete a longer course. Students may complete this course in three winter terms of twelve weeks each, in this way providing a winter course for young farmers, who may be able to spend only the winter at the University.

One Quarter Courses.

No entrance requirements are made for these courses.

Special One Quarter Course in Agriculture.

This course covers a period of twelve weeks, during the winter term, and is composed of courses one, two, three, and seven, as announced under the head of Agriculture in the Department of Instruction. It is designed to give students, in the briefest time possible, some knowledge of the principles of Agriculture, soils, farm crops, fertilization, and the principles of breeding, caring for, and feeding animals.

One Quarter Course in Animal Industry.

This is a winter quarter course in Veterinary Science, Stock Breeding, Stock Feeding, and a general survey of the subject of animal industry. The purpose is not to make veterinary surgeons, but to enable students to diagnose properly the principal diseases among

farm animals, to treat common accidents, and to use preventive measures; and to understand the principles of breeding and feeding domestic animals.

One Quarter Course in Horticulture.

This is work which may be taken in the winter quarter and consists of studies in Plant Propagation (course 1); Principles of Fruit Culture and Pomology, (course 2). Economic Botany and Economic Entomology should be taken parallel with these subjects.

One Quarter Course in Poultry Industry.

This course is designed to meet the needs of those who expect to engage in the poultry industry. Practice will be given in the operation of different makes of incubators and brooders; feeding for egg production; fattening fowls for market; caponizing; judging and mating. The lectures will cover the origin, classification, and characteristics of domestic fowls, breeding, feeding, management, and the construction of poultry buildings.

Six Weeks Agriculture Lecture Course.

This course will consist of sixty lectures on the following ten subjects. The lectures will begin on the first Monday after the opening of the Winter Quarter, and continue for six weeks, two lectures being given each day at times to be arranged to accommodate lecturers and students. This course is intended primarily for farmers who shall find it profitable to spend a brief time at the University during the winter, to learn something of the scientific side of agriculture.

All students of the University who may take these lectures will be given one course credit.

Animal Breeding and Feeding,	6 lectures, T. C. Atkeson.
Veterinary Science,	6 lectures, F. P. Ruhl.
Fruit Culture and Gardening,	6 lectures, K. C. Davis.
Fertilizers,	6 lectures, B. H. Hite.
Economic Entomology,	6 lectures, A. D. Hopkins.
Economic Botany,	6 lectures, W. E. Rumsey.
Poultry Industry,	6 lectures, Horace Atwood.
Agricultural Physics,	6 lectures, T. E. Hodges.
Formation of Soils,	6 lectures, S. B. Brown.
Home Sanitation,	6 lectures, Miss H. B. Clark.

DEPARTMENTS OF INSTRUCTION.

Only the technical courses are described here. For the other courses which may be elected by students in the College of Agriculture, see the courses in the College of Arts and Sciences.

Agriculture.

Professor Atkeson.

1. **Soils and Farm Crops.** Lectures and recitations. First principles of Agriculture; origin, cultivation, drainage, and classification of soils; indications of fertility; manures and manuring; production and handling of farm crops; preparation of land for the seed and subsequent care of the plant; pastures, meadows, and forage, and a general study of farm machinery and buildings. Bailey's "Principles of Agriculture." Fall, 9:30; A.

2. **Breeds and Breeding.** Recitations and lectures. What is meant by breeding; how to attain the ideal; the principles of heredity; atavism, variation, selection, correlation, in-and-in breeding, controlling sex; parental, mental, environment, and climatic influences; history, development, purposes, and uses of the different breeds of domestic animals. Shaw's "Animal Breeding;" Shaw's "Study of Breeds." Winter, 11:30; A.

3. **Feeds and Feeding.** Lectures and recitations. Laws of animal nutrition; composition and digestibility of feeding stuffs; feeding farm animals; feeding for milk, muscle, and fat; sources of food; how the animal uses food; preparation of food; influence of food on animal form; study of rations and feeding standards; care and management of live stock, including poultry. Henry's "Feeds and Feeding." Winter, 8:30; A.

4. **Rural Economics.** Lectures and recitations. Farming as a business; method of keeping farm accounts; a brief study of the laws that directly concern the farmer; how the farmer is affected by the general industrial and social conditions which determine and modify an intelligent prosecution of his business; the mutual relations of agriculture and other industries; value and prices, with especial reference

to land and agricultural products; system of land tenure; general principles of co-operation; co-operative distribution, production, banking and insurance; farmer's organizations, their objects, aims, and purposes; farmers' institutes and best methods of conducting them; a careful study of all questions affecting agriculture. Robert's "Farmstead"; Atkeson's "Book-keeping for Farmers"; Fairchild's "Rural Wealth and Welfare." Spring, 9:30; A.

5. History of Agriculture and Commerce. Lectures and recitations. A general history of agriculture, beginning with the most ancient times, tracing the history of agriculture, agricultural methods and the development of trade and commerce through all ages to the present, with a special study of the present practices and methods of competing with foreign countries; methods of exchange in ancient times; shipping of the ancients; fairs and markets; results of maritime discoveries; changing of commercial routes; scientific and industrial discoveries affecting commerce; dependence of manufacturers upon producers of raw material. "Hoskyn's "Inquiry into the History of Agriculture"; Flint's "One Hundred Years of Progress"; Ford's "History of Commerce and Industry." Spring, 11:30; A.

6. Commercial Geography. A description of the surface of the earth, with special reference to the production, manufacture, transportation, and exchange of articles of trade. A general outline of the countries of the world, soil, climate, agricultural products, forests, manufactories, quarries, mines, centers of industry, foreign relations, ways of communication, social relations and conditions, imports, exports, and markets. Special attention is given to the study of the United States, area, climate, position, population, natural resources, raw products, manufactures, water-ways, railways, seaports, exports, imports, reasons for rapid growth of Western cities, industrial possibilities. Adams' "Commercial Geography."

Fall, 10:30; Winter, 10:30; A.

7. Fertilizers and Manures. Lectures and recitations. General relation of soil and air to plants. The atmosphere as a source of plant food; relations of water to the soil; movements of water in the soil; soils as chemical agents; manures and manuring; chemical fertilizers; potassic manures; magnesium, sodium, and lime compounds. Aikman's "Manures and Manuring." Winter, 9:30; A.

8. Agricultural Science. Lectures and recitations. Farmyard manures; green manuring; humous and vegetable moulds; composts and modes of applying manures; theory of the rotation of crops; irrigation; growth of crops; maintenance of meadows and pasture lands,

and a general discussion of the methods of extensive and intensive farming. Storer's "Agriculture." Spring, 10:30; A.

9. **Farm Equipment.** Lectures and recitations. Selecting, planting, and equipping farms; planning and erecting farm buildings and fences; building roads; farm vehicles and machinery; farm implements and the application of different kinds of power for farm purposes. Half Course. Fall, 11:30; A.

10. **Poultry Industry.** Lectures and recitations. Study of breeds of poultry. Discussion of equipment, including houses, incubators, and numerous mechanical appliances necessary to the business. Artificial and natural incubation. Breeding, feeding, and care of poultry. Poultry farming as a business. Stoddard's "The New Egg Farm"; "Felch's "Poultry Culture." Half Course. Fall, 11:30; A.

Horticulture and Forestry.

Professor Davis.

The instruction offered in this department is of a practical nature and especial stress is laid upon those branches which are particularly applicable to the conditions of West Virginia.

1. **Plant Propagation.** The instruction offered under this heading not only serves to lay a foundation for the courses in Pomology and Vegetable Gardening, but also explains the theory of plant life, the essentials for its thrifty existence and the means at man's disposal for providing these conditions. The chief topics considered are: germination, multiplication by cuttings, layers, stolons, buds, grafts, the processes of reproduction, such as pollination and its effects upon plant structures, artificial pollination. Opportunity is given for actual practice in connection with these topics.

One term in Botany should be studied before, or parallel with, this course. Fall, 8:30; and Winter, 9:30; 9 A.

2. **Pomology.** This course is intended to familiarize the student with the culture of fruits, including locating and laying out of orchards, setting, cultivation, pruning, fertilizing, protection from injurious insects and diseases by sprays and other means. The classroom work is supplemented by practical exercises.

A knowledge of the elements of Botany is almost a necessity, in order that the student make progress in this course.

Winter, 8:30; 9 A.

3. **Vegetable Gardening.** The principles underlying the propagation, planting and cultivation of garden vegetables, consideration of

their insect enemies and fungous diseases; the laying out and management of market gardens and home grounds, the construction and management of greenhouses. Practical exercises are given in garden and greenhouse.

The requirement of at least one term in Botany is the same as for Courses 1, and 2. Spring, 8:30; 9 A.

4. **Plant Breeding.** A study of the methods of plant breeding, evolution and heredity, as applied to cultivated plants. This course is designed to meet the requirements of advanced students.

Prerequisites: Two courses in Botany, and Courses 1 and 2 in Horticulture.

Hours by appointment when three or more students have chosen the course.

5. **Forestry.** This course is devoted to the consideration of the principles of scientific forestry, with special reference to the conditions presented in West Virginia and in the United States. Some of the topics are: protection of growing crops, maintenance of water supply, navigable streams, equable climate and future timber supply. This work is open to any student who has had elementary training in Botany.

Hours by appointment when three or more students have chosen the course. Systematic reading will be given for a smaller number.

Veterinary Science.

Professor Ruhl.

These courses are given during the winter term only.

The purpose of these courses is to give students an elementary knowledge of veterinary medicine, which will enable them to diagnose the principal diseases of domestic animals, and treat intelligently ordinary diseases and accidents, and adopt preventive measures. Owing to the improvement in breeding and increase in value of all farm animals, this branch of agriculture is receiving considerable attention. This state is especially adapted for engaging in this vocation.

1. **Comparative Anatomy of Domestic Animals.** This is taught by a series of lectures, and supplemented by demonstrations from charts and postmortems on the cadaver.

Materia Medica, Therapeutics, and Pharmacy. The lectures on this subject will be illustrated by an exhibition of the principal drugs used in veterinary medicine—their actions, uses and doses described, also the manner of preparing, preserving and administering.

Winter, 9:30; A.

2. **Theory and Practice of Veterinary Medicine.** This course will consist of lectures on diseases of domestic animals and whenever possible demonstrations upon the subject itself.

Obstetrics. Will embrace lectures and illustrations of diseases and accidents of pregnancy and obstetrical operations.

Winter, 10:30; A.

3. **Principles of Surgery.** Instruction in this branch includes dental operations and treatment of diseases requiring surgical interference.

Lameness of Animals. This branch receives special attention, regarding location and treatment.

Prerequisites, Courses 1 and 2. Winter, hour to be arranged.

4. **Clinical Instruction.** The free clinics provide ample material for the student to become familiar with the manner of examination of patients.

The Administration of Medicines and the Treatment of Disease. Examination for Soundness, and Ascertaining the Age.

Winter, 1:30; A.

5. **Practical Exercises.** Subjects are provided by the college and students will be required to bring their knowledge into practice, securing of patients for operation and actual performance of operations, treatment of wounds, and application of dressings.

Prerequisites, Courses 1, 2, and 4. Winter, hour to be arranged.

Economic Entomology.

Prof. Hopkins and Mr. Rumsey.

1. **Economic Entomology.** This course will be conducted with a view to stimulating an interest in the study of insect life, and giving instruction along lines especially suited to the needs of the agricultural student. Text-books and laboratory demonstrations will be used to give such elementary instruction in economic and systematic Entomology as will give the student a general knowledge of the science, and instruction in the application of this knowledge will be given by means of practical field and research work. Spring, 8:30; A.

Economic Botany.

Mr. Rumsey.

1. **Economic Botany.** Practical and comparative studies of seeds, seedlings, and the organs of mature plants. The growth, dissemina-

tion, duration and eradication of weeds. A study of woody plants and herbarium work. Laboratory hours by appointment.

This course is designed especially for agricultural students, but will also be of value to all those interested in the subject of botany, for the practical laboratory and field work will bring the student in closer touch with nature, and teach him to see and more fully understand the valuable and interesting phases of the plant world. Prerequisites, Elementary Botany as given in the Preparatory Department of the University, or its equivalent. Spring, 10:30; A.

Agricultural Chemistry.

Professor Hite.

1. **Agricultural Chemistry.** A course of lectures on the application of chemical principles to farm economy. The relation of Chemistry to Agriculture; relation of the plant to soil and air; sources of plant food; osmosis and osmotic pressure; mechanism of plant nutrition; germination and elaboration of plant tissue. Soils; their origin, formation, composition, classification, deterioration, and improvement. Nitrification of soils. Prerequisite, general elementary Chemistry. Reference book, Johnson's "Agricultural Chemistry." Spring, 10:30; A.

2. **Agricultural Chemical Analysis.** This course includes the analysis of farm products, soils, ashes, fertilizers, mineral and drinking waters, etc. Prerequisites, Qualitative and Quantitative Analysis and Agricultural Chemistry 1. Laboratory guide, Wiley's "Principles and Practice of Agricultural Chemical Analysis."

Fall, Winter, Spring, 2:00; A.

Agricultural Physics.

Professor Hodges.

15. **Agricultural Physics.** Mechanical analysis of soils; designing and construction of farm buildings, economy in form and material; ventilation and regulation of temperature; draft of farm machinery; farm motors and road construction. Open to all college students. Requirements, Physics 1, or equivalent work elsewhere. King's "Agricultural Physics." Spring, 8:30; 11 S.

Mechanic Arts.

Prof. Jones, Mr. West, Mr. Fairchild and Mr. Cather.

1. **Woodworking.** Instruction in carpentry, joinery and other bench work. Exercises with the fundamental tools in soft and hard

woods and in matching, molding, joining and making typical framed work; models of doors, gates, bridges, etc. Nine hours per week or 3-5 course.

Fall, Monday, Wednesday and Friday, 1:30; or Tuesday and Thursday, 1:30; and Saturday, 8:00; 21 E.

2. **Forging.** Exercises in drawing out and sizing, forming and welding, jointing and fitting iron; steel forging, tempering, annealing; determining quality of iron and steel and strength of students' welded joints; exercises in making and dressing typical farm tools. Nine hours a week, or 3-5 course. Winter, Mon., Wed., and Fri., 1:30; 7 E.

3. **Machine Shop.** Iron work at the bench, chipping, filing, fitting, scraping, polishing; hand work with machine tools; drilling, tapping; brazing, tinning, soldering, laying out, cutting and forming sheet metal. Nine hours per week, or 3-5 course.

Spring, Monday, Wednesday and Friday, 1:30; 11 E.

Farmer's Reading Course.

Since, for many reasons, it is impossible for a great majority of the farmers of the State to attend the College of Agriculture, it has been determined to do everything possible to take the college to the farmers, by offering a systematic course of home reading in agriculture. It is not expected that this course will in any sense take the place of a regular course at the Colege, but it is expected that every one who faithfully pursues this carefully prepared course of reading upon technical agriculture, horticulture, stock-growing, rural economy, and kindred subjects, will be vastly benefited thereby.

Registration.

Every farmer who reads this announcement is cordially invited to write the Dean of the College, asking to be registered as a student.

No fee is charged for registering students in this course.

There is no expense connected with this course, except that each student must purchase the books used.

This course is designed, primarily, for persons who are actually engaged in the practice of agriculture, and is open to all, there being no requirements as to age, sex, or previous preparation, and no examination is required for admission.

The course may be begun at any time, and carried on as rapidly, or as slowly as may be desirable. The subjects may be taken up in any order desired, and any part of the course taken without the rest. The whole course is divided into four divisions, but a complete course

will consist of any two of the four divisions, or the student may elect any ten of the twenty subjects given.

Certificates.

Any student who has completed a subject will, upon notifying the Dean, receive an examination paper, on that subject, to which written answers are to be returned, accompanied by a statement upon honor, that the answers are the unaided work of the person sending them. These answers will be graded, and anyone receiving a grade of 75 per cent. or more, in all the studies of any two divisions, or any ten studies elected from the four divisions, will receive a suitable certificate, signed by the President of the Board of Regents, President of the University, and the Dean of the College of Agriculture.

Local Circles.

Individuals may take the course by themselves, wholly independent of anyone else. Much mutual benefit will be derived, however, by the formation of local reading circles, which may meet at regular times for study and discussion, and it is urged that this be done whenever possible.

It is suggested, also, that farmers' organizations—granges, institutes, farmer's clubs, etc.—may add to the interest and profit of their meetings by taking up the course, or such portions of it as may be of special interest to them.

Only one set of books need be purchased for each reading circle, institute, grange, or club, although it is believed that a greater interest in the work will be secured by having at least one book for each member.

One book at a time may be purchased by the individual student or the reading circle, if circumstances make this desirable.

The text-books selected for this course are the very best and latest standard works, and contain in all cases, a plain, practical presentation of the scientific principles underlying the best practices in the different departments of farming, stock-raising, fruit-growing, and gardening. The scientific terms used are fully explained.

When students have reported to the College for registration they should proceed at once to get the books, and begin the work in accordance with the terms of this announcement, without waiting for a reply.

All students are expected to ask for assistance whenever difficult problems are encountered, or any passages are found in the books that are not perfectly clear.

Illustrative Material.

Special attention is called to the fact that the course of study here laid down is a study of the materials and processes going on upon the farm, and that the text-books should be used as an aid to direct personal observation and study of the things themselves, and not as a substitute for it. In this respect, an agricultural reading course has advantages over many others, and it is hoped that no one will forego these advantages, and confine his work to the text books alone.

Books at Reduced Rates.

Arrangements have been made with the Orange Judd Co., 52-45 Lafayette Place, New York, by which the books required will be furnished the students of this course only, at the prices named, which are a great reduction from regular retail rates. These prices include postage and are payable strictly in advance.

Division I.—Crop Production. Postpaid.

Fertility of the Land—Roberts	$0.95
Principles of Agriculture—Bailey	.95
Fertilizers—Vorhees	.77
The Book of Corn—Myrick	1.50
Tile Drainage—Chamberlain	.27

Division II.—Animal Industry.

Study of Breeds—Shaw	1.00
Animal Breeding—Shaw	1.00
Feeds and Feeding—Henry	1.50
Farm Poultry—Watson	1.37
American Dairying—Gurler	.80

Division III.—Horticulture.

Principles of Fruit Growing—Bailey	.99
Fruit-Harvesting, Storing, and Marketing—Waugh	.70
Garden-Making—Bailey	.77
Bush-Fruits—Card	.77
Spraying—Lodeman	.77

Division IV.—Rural Economy.

Book-keeping for Farmers—Atkeson	.20
The Farmstead—Roberts	.95
Rural Wealth and Welfare—Fairchild	.95
How to Co-operate—Myrick	.70
The Woman's Manual	.70

Directions for Ordering Books.

Orders for books should be addressed directly to the Orange Judd Co., and should in all cases be accompanied by a postal, or express money order or draft, payable to the above firm, for the full amount of the order.

All communications in regard to the Farmers Reading Course should be addressed to

T. C. ATKESON,
Dean of the College of Agriculture,
Morgantown, W. Va.

THE WEST VIRGINIA AGRICULTURAL EXPERIMENT STATION.

BOARD OF REGENTS.

The Regents of the West Virginia University.

Station Committee.

C. M. BABB. J. R. TROTTER. JNO. B. FINLEY.

Station Staff.

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A. D. HOPKINS, Ph.D., ...Vice-Director and Entomologist
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K. C. DAVIS, Ph.D., ...Horticulturist
W. E. RUMSEY, B.S.Agr., ...Assistant Entomologist
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GILBERT M. JOHN, ...Assistant Horticulturist
JOHN B. WALLACE, ...Bookkeeper
M. A. STEWART, ...Librarian
MAY WATSON, ...Stenographer

The Experiment Station is a distinct and separate department of the University, and was established by the Board of Regents in 1887, by authority of an Act of Congress, known as the Hatch Act, which was passed on the 2d day of March of that year. The funds for carrying on the operations of the Station, with the exception of its earnings, are derived wholly from the general government. The aforesaid Act

in section 2 fully states the object and purposes of the Experiment Station as follows:

"That it shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches and experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states and territories."

Bulletins and annual reports setting out results of experiments and investigations conducted at the Station are published for gratuitous distribution, and will be mailed, free, to any citizen of the State applying for them.

The Station invites correspondence, suggestions, and advice from farmers and others interested in this work, and all such. with reference to bulletins, experiments, or any matter relating to agriculture, will be welcomed and will receive careful and prompt attention. Correspondence should be addressed to the Director of the Station.

THE COLLEGE OF LAW.

The Faculty.

D. B. PURINTON, LL.D., President.

OKEY JOHNSON, A.M., LL.B., Dean, and Professor of Constitutional and International Law, and the Law of Corporations.

ST. GEORGE TUCKER BROOKE, LL.D., Professor of Common and Statute Law.

WILLIAM P. WILLEY, A.M., Professor of Equity Jurisprudence and Commercial Law.

Courses Offered in the College of Law.

There are three courses offered:

1. A course leading to the degree of Bachelor of Laws. The requirements to enter this course are the same as the requirements to enter the College of Arts and Sciences.

2. A course leading to a Diploma of Graduation in Law, which, as well as the degree, will admit the graduate to practice law in any Court in West Virginia. The requirements to enter this course are the presentation of evidence that the applicant has passed an examination on twenty-four of the preparatory courses which may be offered for admission to the College of Arts and Sciences. Substantial equivalents will be received.

3. A course leading to the degree of Master of Laws.

Admission.

1 Students upon registering in the College of Law, shall declare their intention (a) to become candidates for the diploma, or (b) for the degree of LL.B., or (c) to take a special course in preparation for the examination for admission to the Bar.

2 When students register as special students for the Bar examination, they will not be permitted to change to the regular courses, except by the unanimous consent of the Law faculty, and with the approval of the Committee on Classification and Grades.

3 Special students may take the regular course examinations and receive for the courses passed credit for the Bar examination, but no credit shall be given for such courses toward a diploma or degree.

A "course" represents the amount of work done by a class meeting five times a week for one quarter (twelve weeks).

Special Students.

Persons who are at least twenty-one years of age, and who are not candidates for a degree or for a diploma, but who desire to prepare for the examination for admission to the bar, will be admitted to the College of Law as special students.

Any special student who completes the whole Law Course will receive a certificate of that fact signed by the Law Faculty, and any special student who requests it will receive from the Law Faculty a certificate showing the time he has spent in the College of Law and the subjects completed.

Conditional Admission.

Students who have not had opportunity to make the preparation required for admission may enter the Preparatory School of the University and complete their preparation. If a student lacks only a part of the necessary preparation, he may be admitted conditionally, and complete his preparation while carrying on some of the studies of the Freshman year.

Advanced Standing.

A candidate for advanced standing may receive credit for so many of the courses required in the Junior year as he may be able to pass satisfactorily upon examination before the Faculty of the Law College; but no credit for advanced standing will be given for any Senior course. No diploma will be granted to any student, or degree conferred upon him, unless he has been in actual attendance upon the lectures during at least three quarters. Examinations for advanced standing will be held by the Faculty of the Law College on the third, fourth and fifth days of each Fall Quarter.

DEGREES.

Bachelor of Laws.

The degree of Bachelor of Laws will be conferred upon any student who satisfies all entrance requirements, and satisfactorily completes twenty-one college courses in general culture, and twenty-one courses in law. The twenty-one courses in law, (of which one course must be

a thesis, if required by the Dean), constitute the regular two years law course. Graduates of West Virginia University, or other colleges or universities of recognized standing, and students who have completed two full years of a college course at a recognized college, are not required to take the twenty-one college courses in general culture, but are admitted immediately to the Junior class, and may complete the course and receive the degree of Bachelor of Laws in two years.

Master of Laws.

The degree of Master of Laws will be conferred on any graduate of this College of Law who has previously received the degree of Bachelor of Laws, who pursues the study of law in this College for one year after graduation, and who completes to the satisfaction of the Faculty of the College of Law such a course of study as may be required, and who at the end of the year presents to the Faculty a satisfactory thesis on some legal subject to be selected by the student, with the approval of the Law Faculty, and the privilege thus extended to graduates of this College of Law is also extended to graduates of other law schools of equal grade.

This course will consist mainly of original investigation, under the direction of the Faculty of the College of Law. Most of the work will be done in the Law Library, the "lawyer's laboratory." Legal questions will be given for solution, and cases to be analyzed. Cases without syllabi will be given to the student, who will be required to make a complete report of each case,—the questions involved, how they arose, the pleadings, how the case was decided in the inferior court, how it was decided in the Appellate Court on appeal or writ of error, and the grounds on which the decision was made. The syllabus of the case will then be required, careful distinction being made between the decision and the mere obiter dictum of the judge who announced the decision.

Diploma of Graduation in Law.

A Diploma of Graduation in Law will be conferred upon any student who satisfies the entrance requirements to the course leading to the Diploma, and passes satisfactory examinations in all the subjects taught in the College of Law.

Credit Towards the Degree of Bachelor of Arts.

The courses in Constitutional Law, International Law and Blackstone may be counted toward the degree of Bachelor of Arts.

Courses of Instruction.

There is no prescribed order in which a student in the four years degree course must take the general culture courses above indicated, which are required in the Freshman and Sophomore years. Each student will arrange with his class officer at the beginning of each quarter as to the courses he will take during that quarter. The class officer will use his judgment in the assignment of studies. It is his duty to see that each student under his charge takes work which will be most beneficial.

The studies of the Junior and Senior years constitute the professional course in Law. These studies are all required, and must be taken in a specified order, unless special permission is obtained to vary that order. Students who are taking the two years Diploma course have the same studies as Juniors and Seniors in the four years degree course.

The professional course offered by the College of Law is the full, complete and comprehensive course of the modern law school, which will prepare students for the practice of Law in any part of the United States.

The aim of the College of Law is to make not merely theoretical, but practical lawyers, who will go from the lecture-room to the bar thoroughly equipped for the active duties of the profession. It aims, moreover, while making thorough lawyers, to give the student a correct conception of the scope and character of the profession, and to start him in life with high ideals of professional ethics and dignity.

The methods of instruction consist of lectures, references to illustrative cases, examinations from approved text-books, quizzes on lectures, the drawing of the various legal papers requisite in the ordinary practice of the law, and practice in moot courts. There are oral examinations daily on the subjects of the lectures and the text-books used, and comprehensive written examinations on each topic or branch of law as completed.

The professional part of the regular Law Course is designed to occupy the student two full years, and is divided between the College quarters in such a manner that students may with advantage enter at the beginning of any quarter and complete and obtain credit for the branches taught during that quarter. The following schedule shows the division of the quarters and subjects studied during the Junior and Senior years:

Professional Courses in Law.

Junior Year.

Fall Quarter.

Blackstone. Professor Brooke. Full course, 8:30.
Contracts. Professor Willey. Full course, 9:30.
Agency. Professor Johnson. Half Course. Last six weeks, 10:30.
Criminal Law. Professor Johnson.
Two-thirds course. First eight weeks, 11:30.
Parliamentary Law. Professor Johnson.
One-third course. First four weeks, 9:30.

Winter Quarter.

Blackstone. Professor Brooke. Full course, 8:30.
Negotiable Paper. Professor Willey.
One-third course. First four weeks, 9:30.
Suretyship and Guaranty. Professor Willey.
One-third course. Second four weeks, 9:30.
Bailments. Professor Willey. One-third course. Last four weeks, 9:30.
Criminal Procedure. Professor Johnson. Full course, 11:30.

Spring Quarter.

Blackstone. Professor Brooke. Full course, 8:30.
International Law. Professor Johnson. Full course, 9:30.
***Engineering Jurisprudence.** Professor Johnson.
Half course. First six weeks, 10:30.
Civil and Criminal Evidence. Professor Willey. Full course, 11:30.

Senior Year.

Fall Quarter.

Corporations. Professor Johnson. Full course, 9:30.
Common Law Pleading and Practice. Professor Brooke.
Full course, 10:30.
Equity and Equity Pleading. Professor Willey. Full course, 11:30.

Winter Quarter.

Constitutional Law. Professor Johnson. Full course, 9:30.
Real Property. Professor Brooke. Full course, 10:30.

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*Elective. This course is not required of candidates for a law degree, and is inserted here only to show the time at which it is given.

Equity and Equity Pleading. Professor Willey. Full course, 11:30.
Court Practice. Professors Johnson, Brooke, Willey. Full course.

Spring Quarter.

Sales. Professor Willey. Half Course. First six weeks, 9:30.
Partnership. Professor Willey. Half Course. Last six weeks, 9:30.
Torts. Professor Brooke. Full course, 10:30.
Practice. Professor Johnson. Half course. Last six weeks, 11:30.
Damages. Professor Johnson. Half course. First six weeks, 11:30.
Court Practice. Professors Johnson, Brooke, Willey. Full course.
Thesis. One course.

Text Books.

The text-books used in the College of Law are carefully selected and are such as will be useful to the student throughout his professional career. They are all kept at the University, and sold to the students at a discount from the regular prices. They are as follows:

Blackstone's Commentaries.
Clark on Contracts.
Elliott on Insurance.
Clark on Criminal Law.
Clark on Criminal Procedure.
Norton on Negotiable Paper.
Hale on Bailments.
Huffcut on Agency.
Hale on Damages.
Cooley's Principles of the Constitution.
Shipman's Common Law Pleading and Equity Pleading.
Brooke's Notes on Pleading and Practice in West Virginia
Clark on Corporations.
Fetter's Equity.
Williams' Real Property.
Glenn's International Law.
Pollock on Torts.
Underhill's Evidence.
Tiffany on Sales.
George on Partnership.
Roberts' Rules of Order.

Expenses.

To West Virginia students tuition is free.

To students from other states tuition is $8 per quarter (twelve weeks).

The matriculation fee, payable by all students upon entering the University, is $5. Unless a student remains out of the University more than three years, the matriculation fee is paid but once by each student.

The contingent fee, payable by all students, is $2.50 per quarter.

Board and room may be obtained in Morgantown at from $3 to $4 per week.

The text-books absolutely essential to the student in pursuing the prescribed course of study are not numerous or costly, and are such as will be useful to him throughout his professional career.

Examinations for Admission to the Bar.

It is made the duty of the Law Faculty by the laws of the state to examine all applicants for admission to practice law. These examinations are held at the University, on the first Wednesday, Thursday and Friday in February, May, August and November.

The only requirement for admission to these examinations is that the applicant shall have studied law for two years either in private or at some law school. The examination covers the branches taught in the Junior and Senior years (the prescribed professional course) in this College of Law.

The following persons have successfully passed the Bar examination from May, 1901, to February, 1902, both inclusive:

May, 1901.

Name of Applicant.	Residence.	Where Law Studies Were Pursued.
Geo. W. Cooley,	Strasburg, Va.	Univ. of Virginia.
P. W. Cooper,	Auburn,	W. Va. University.
H. C. Hobb,	Virginia,	Washington & Lee.
J. M. Harper,	Spencer,	W. Va. University.
T. W. Hendrick,	Morgantown,	W. Va. University.
H. W. Houston,	Parkersburg,	W. Va. University.
Sheridan Moore,	Wheeling,	W. Va. University.
J. N. Naylor,	Wheeling,	Univ. of Virginia.
L. A. Reymann,	Wheeling,	Univ. of Virginia.
K. M. Snyder,	Lewisburg,	Univ. of Virginia.
H. W. Williams,	West Virginia,	W. Va. University.
C. C. Pierce,	Rowlesburg,	W. Va. University.

August, 1901.

J. Mentor Caldwell,	Parkersburg,	Columbia Univ., Wash. D. C., LL.B.
W. G. Fisher,	Keyser,	Kansas City Law School, LL.B.

C. W. Good, ...Jackson County, ...Law Office.
C. E. Kimbrough, ...Charleston. .....Howard Univ., LL.B.
G. J. Rogers, ...Wheeling, ...Harvard Un.A.B.,LL.B.
F. C. Newcomer, ...Pennsylvania, ...W. Va. University.

November, 1901.

L. D. Archer, ...Parkersburg, ...W. Va. University.
M. Powell. .....Blacksville .....W. Va. University.
H. C. Richards, ...Wheeling. .....Law Office.
A. H. Robinson, ...Wheeling, ...Law Office.
John Shriver, ...Morgantown, ...W. Va. University.
M. P. Theodoroff, ...Morgantown, ...W. Va. University.
Geo. Holland, ...Bluefield. .....Law Office.
A. C. McIntire, ...Martinsburg. .....Dickinson Law School.

February, 1902.

W. H. Brant, ...Morgantown, ...W. Va. University.
J. R. Pendleton, ...Hardy. .....W. Va. University.
W. G. Barnhart, ...Red House Shoals, ...W. Va. University.
F. C. Cooke, ...McDonald, ...W. Va. University.
J. E. Caton, ...Huntington, ...W. Va. University.
S. R. King, ...Nicholas County. .....W. Va. University.
Dennis McClung, ...Greenbrier County ...W. Va. University.
G. T. Eddy. .....Morgantown, ...W. Va. University.
W. E. Glasscock, ...Morgantown, ...W. Va. University.
H. R. Sayre, ...Wheeling, ...W. Va. University.
Geo. Patterson, ...Percy, Pa., ...W. Va. University.
F. W. Goshorn, ...Charleston, ...Washington & Lee.
E. A. Boner, ...Elkins, ...Dickinson Law School.
H. H. Byrer, ...Philippi. .....Law Office.

Of the above forty-one, tenty-four prepared for the Bar in the West Virginia University College of Law; four in the University of Virginia; two in Washington and Lee; two in Dickinson Law School; one in Columbia University; one in Kansas City Law School; one in Harvard University; one in Howard University; and five in Law offices.

Law Library.

Heretofore the great want of the College of Law has been a proper Library, a suitable place for it, and a Librarian. That want has been in some measure supplied. The College of Law has now a good library room, with stack-room attached, which contains over sixteen hundred volumes of well selected books. It contains the United States Supreme Court Reports, also Massachusetts, New York, Pennsylvania, Virginia, and West Virginia Reports, with many other Reports, and a good se-

lection of text-books, and is under the charge of the University Librarian. The Law Library, small as it is, is much appreciated. It will be further enlarged.

Advantages of a University Law Course.

The increasing favor with which law schools are regarded is due to the higher standard of preparation necessary to enable a lawyer to attain eminence in his profession, as compared with a past age. The lawyer who now aspires to occupy a high position at the bar must be thoroughly equipped. The competition he must meet demands a broad culture, scholarly discipline and a thorough mastery of the principles of law. Law schools have largely contributed to the elevation of the standard. They are now regarded as essential in the legal profession as the medical college and theological seminary are to the medical and clerical professions.

The almost universal experience is that when a young man sits down in a law office to prepare for the bar he becomes impatient to engage in the active business of his profession with which he is surrounded. He makes haste to finish rather than master the course. The active practitioner under whom he is reading is engrossed with the cares of his business and gives him but little attention. He reads in a superficial manner enough branches to enable him to secure a license to practice, believing that he will have time enough when he is admitted to the bar to finish his studies. But the groundwork of a successful professional career is forever neglected, as a rule, constantly proving the old maxim that "he who is not a good lawyer when he goes to the bar will seldom be a good one afterward."

The university course brings the student in constant association with those who are making mental discipline a business; it surrounds him with influences that are elevating and refining; produces habits of application which he will seldom acquire in any other place, and without which he will never make a lawyer.

The advantage of access to a large and well-selected law and miscellaneous library, and the valuable drill of the Literary Societies and Moot Courts are of no small consideration.

Moot Courts.

However familiar the student may be with the principles and theories of law in all its branches, he will be more or less awkward and confused when he goes to the bar and attempts for the first time to make a practical application of legal remedies, unless he has been previously drilled on this behalf. The Moot Court supplies, as well as anything

other than a judicial tribunal can do, the drill and discipline necessary to prepare the student for the trial tables. In these courts he is taught to apply legal remedies according to the common law and chancery systems of practice; to bring suits; draw papers, pleadings, briefs, etc., and take the various steps incident to bringing a cause to trial, and then to try it according to the rules of evidence, including the argument, charge, verdict, motion in arrest of judgment, writ of error, etc. The Moot Court is organized in strict conformity to the practice of the regular courts in all its details. The students themselves act respectively as counsel, jurors, witnesses and officers of the court, thus learning by actual doing all the forms of court practice; while a professor sits as judge, with the double aim of illustrating the legal principle involved and explaining the rules of practice. The grammatical accuracy, rhetoric, elocution and courtesy of deportment of students also come under review of the professor, and the young men are thus fitted to appear and conduct themselves at the bar as gentlemen and scholars as well as lawyers. The system of Moot Courts is thorough.

Each of the professors holds court once a week, in his room, for the trial of law cases.

There is a Supreme Court of Appeals, composed of all three professors, the Dean sitting as president of the court, to which all appeals from decrees, and writs of error to judgments rendered in the three several Circuit Courts may be taken. The system works admirably, and gives the student the practice in all the courts, following his case from the Circuit Court, where it is brought, to the Supreme Court of Appeals, which determines finally all cases. Trials are occasionally held in Commencement Hall, and are open to the public.

SCHOOL OF MUSIC.

FACULTY.

RUSSELL McMURPHY, Acting Director and Instructor on the Piano.
GRACE MARTIN SNEE, B.M., Instructor on the Pipe Organ and Piano.
JULIA AILLEEN CLARK, Instructor in Voice.
ROSS SPENCE, Instructor on Violin, Viola and other Stringed Instruments.
THOMAS GETZANDANER HILL, Instructor on Brass and Wood Wind Instruments.
ADA VIRGINIA HOUSTON, Assistant on the Piano.

Origin and Purpose.

The School of Music is an integral part of the University, having been organized as such in 1897, and owes its inception to the need, long felt by the patrons and friends of the University, of a well-equipped department of Music, in connection with the other departments, where young men and women of the state might have the opportunity of securing thorough musical training with other necessary educational advantages, and at reasonable cost. It is also a recognized fact that the aesthetic influence of a good School of Music upon the student body in general is most beneficial.

Courses of Study.

The instruction in the School of Music is based upon the most approved and practical modern methods in Piano-forte and Organ playing, Voice Culture, Violin, Viola, Violincello, Mandolin, Guitar, Banjo, Cornet, Clarionet, and other Brass, and Reed, Band and Orchestral instruments, Harmony, Theory, Musical History, Sight Singing, and kindred branches. A distinguishing feature of this department is the cultivation of those allied branches which, in connection with the special courses, go to make the student not merely a trained executant, but a broad and liberal musician in the best sense of the word.

Special Advantages.

Many advantages accrue to the student in a School of Music connected with a University. Opportunities are afforded for studying in

the various other departments, thus securing to the music student a symmetrical education, literary and scientific, as well as musical. On the other hand, the existence of a department of Music affords advantages in musical training to the students in all the other departments.

Instruction is furnished free of charge in a number of branches, while in others the tuition fees are merely nominal. The exceptionally low tuition rates which prevail here, are made possible by means of state aid.

Credit for Music on College Courses.

Credit towards the degree of Bachelor of Arts will be given for the courses in the Science and History of Music.

Building and Equipment.

The School of Music has been removed to the new wing of the University building, which has been fitted up especially for its needs. The rooms both for teaching and practice purposes are large, with high ceilings, sound-proof partition walls, oak flooring, electric light, and steam heat. There is also a comfortable reception-room, where students may rest while waiting for their lesson periods. Surrounding the building upon all sides the scenery is superb,—campus, romantic ravine, and winding river, with steep, wooded banks. The equipment of pianos and claviers is of the best, and all the instruments are new. The large and commodious Chapel, seating 1500 people, contains a fine, new Concert Grand Piano, and a magnificent new 3-manual Pipe Organ—tubular pneumatic—built upon the universal wind chest system, and containing 76 stops and mechanical accessories. Excellent opportunities are thus afforded for recital and concert work.

Time Required to Complete a Grade.

Attention is called to the fact that the time required to complete a grade depends upon the student's talent, age, previous instruction, and amount of daily practice. With good health and thoroughly systematized work, a grade (three courses) should be completed in a year.

Requirements for Diploma and Certificate.

A course in sight reading, memorizing, and technical work is followed through all the courses. A knowledge of Harmony, Theory and Musical History is essential to an intelligent interpretation of Music. Elementary study in these three branches is required for completion of the third grade. Students completing the fourth grade will be entitled to a certificate. A candidate for a diploma must complete the re-

quired courses of study of some instrument or Voice, together with four courses in Harmony, passing satisfactory examinations thereon, and must perform in public during the last year of study an entire concert program to test his or her ability to interpret correctly the different schools of composition. Candidates for a diploma in Voice Culture, in addition to the above, must satisfactorily complete the first two grades in the Piano course, and at least two courses in German and Italian.

Candidates for the fourth grade certificate must pass a satisfactory examination in Sight Reading, Memorizing, Technique, Musical History, and have taken at least two courses in Harmony.

Recitals.

A very necessary part of a student's education is the development of confidence, which can only be acquired by appearing occasionally before an audience. To meet this need, Students' Recitals have been established, some of which are open to the public, others only to the intimate friends of the participants. There are also Faculty Recitals and classroom Recitals, at which different styles of compositions are analyzed and rendered, tracing the historic development from the Classic to the Romantic period.

Tuition.

Students whose work is all in the School of Music are not required to pay the usual University fees, but are entitled to all the privileges of the other University students, including the numerous public lectures, which are given frequently by eminent specialists.

The fees vary, according to the teacher, and the kind of lessons preferred,—private or in classes. In most of the departments the private lessons extend over a period of 30 minutes. The class lessons extend over a period of 60 minutes, and the number in each class is limited to three, except in Harmony and Theory and Musical History. Attention is called to the fact that the University quarter averages more than eleven weeks, and is therefore materially longer than the usual music term of ten weeks as conducted by many schools.

Tuition per Quarter.

Piano—two lessons per week (private) of 30 minutes each $16.00
Piano—two lessons per week (private) of 30 minutes each..... 12.00
Piano—two lessons per week (private) of 30 minutes each..... 10.00
Piano—three lessons per week (class for children) of 20 minutes each 4.00

Voice Culture—two lessons per week (private) of 30 minutes each 16.00
Voice Culture—two lessons per week (class) of 60 minutes each. 12.00
Pipe Organ—two lessons per week (private) of 45 minutes each.. 20.00
Harmony—two lessons per week (class) of 45 minutes each..... 9.00
Violin and Viola—two lessons per week (private) of 30 minutes each 16.00
Violin and Viola—two lessons per week (class) of 60 minutes each 12.00
Mandolin, Guitar, Banjo, etc.—two lessons per week (private) of 30 minutes each 12.00
Mandolin, Guitar, Banjo, etc.—two lessons per week (class) of 60 minutes each 9.00
Wood and Brass Wind Instruments—two lessons per week (private) of 30 minutes each 10.00
Wood and Brass Wind Instruments—two lessons per week (class) of 60 minutes each 8.00
Theory and Musical History—(class) 8.00
Ensemble—two lessons per week (private) of 60 minutes each.. 16.00
Ear Training—two lessons per week (class) of 30 minutes each.. 3.00

[When in the judgment of the Director and the teacher a student is capable of taking three private lessons per week, the tuition rate will be increased one-third.]

Pianos for practice one hour per day will be furnished at $3.50 per quarter; two hours per day, $6.00 per quarter; three hours per day, $7.50 per quarter. Clavier practice, one hour per day, $2.00 per quarter.

All tuition and other fees are payable in advance to the Treasurer of the University.

Free Advantages.

The recitals and concerts by the Faculty and advanced students of the School of Music are all free to students of the University.

Free instruction is given to the

Choral Society .....1 evening each week.
Glee Club .....2 evenings each week.
Women's Chorus, ...1 afternoon each week.
Mandolin and Guitar Club .....2 afternoons each week.
Military Band, ...4 afternoons each week.
Orchestra, ...2 evenings each week.

These clubs are all open to students of the University who are competent to enter them and who attend regularly.

The library contains a large number of standard works upon music, all of which are available to students.

Courses of Instruction.

All the courses here announced are given every quarter, and may be begun at any time during the year, as the instruction is largely private.

Piano.

Miss McMurphy, Mrs. Snee, and Miss Houston.

1, 2, 3. **First Grade.**—Emery's "Foundation Studies;" Studies by Gurlitt, Biehl, Bertini; Lynes' "Advancement Studies;" Compositions by Reinecke, Rohde, Emery, Lynes, Kullak, and others.

4, 5, 6. **Second Grade.**—Studies by Czerny, Loeschorn, Heller, Krause, Clementi's Sonatinas; Kunz's Canons; "Schumann Album for the Young;" Compositions by Krause, Kullak, Emery, and other modern writers.

7, 8, 9. **Third Grade.**—Czerny's "Forty Daily Studies;" "Octave Studies" by Turner and Kullak; Bach's "Little Preludes and Fugues," and "Two Part Inventions;" Easier Sonatas of Haydn and Mozart; Mendelssohn's "Songs Without Words;" Compositions by Godard, Schumann, and others.

10, 11, 12. **Fourth Grade.**—Moscheles' opus 70; Kullak's "Octav Studies;" Clementi's "Gradus ad Parnassum;" Bach's "Suites" and "Three Part Inventions;" Sonatas by Haydn, Mozart, Beethoven; Compositions by Chopin, Schumann, Mendelssohn, Raff, Moszkowski, Schubert, Grieg, and others.

13, 14, 15. **Fifth Grade.**—Chopin's op. 10 and 25, and Preludes; Bach's "Preludes and Fugues;" Sonatas by Beethoven; Concertos by Beethoven, Mozart, Mendelssohn; Compositions by Liszt, Henselt, Chopin, Weber, and others; Concertos for two pianos.

Organ.

Mrs. Snee.

Organ students are expected to finish at least the first three grades in Piano before beginning Organ work.

1, 2, 3. **Third Grade**—Stainer's "Organ Primer;" Whiting's "First Studies;" "Rink-Best Organ School," Book III; Bach's "Easy Preludes and Fugues;" Whiting's "The Organist;" Hymn Tunes and Registration; Compositions by Thayer, Silas, Volckmar, Guilmant, Lemmens, and others.

4, 5, 6. **Fourth Grade.**—"Rink-Best Organ School," Books IV and V; Bach's "Preludes and Fugues;" Accompaniment; Eddy's "Church and Concert Organist;" Anthems; Mendelssohn's Sonatas; Compositions by Guilmant, Merkle, Bach, and others; Whiting's "Twenty Preludes and Postludes."

7, 8, 9. **Fifth Grade.**—Bach's "Preludes and Fugues;" Sonatas by Mendelssohn, Guilmant, Merkle, Rheinberger; Compositions by modern composers.

Harmony.

Miss McMurphy.

A thorough knowledge of elementary Harmony is absolutely essential to every musician, whether artist or amateur. The School of Music offers a course of study covering one year, which includes a knowledge of intervals and scales, formation and progression of chords, treatment of suspensions, open harmony, etc., with practical work in harmonizing chants and chorals, and analyzing simple compositions. Emery's "Elements of Harmony" is the text-book.

1. Intervals, scales, formation and progression of common chords, with their inversions; seventh chords, modulations, harmonizing bass progressions, close harmony.

2. Modulations, Suspensions, Open Harmony, Appogiatura, and passing notes, Organ point, harmonizing melodies.

3. Harmonizing Melodies, Double Chant, Chorals, etc.

A course in Theory and Musical History will be offered if a sufficient number of students apply for the work to justify the organization of the class.

Voice.

Miss Clark.

1, 2, 3. **First Grade**—Breathing, control of throat, jaws, tongue, lips, etc.; tone placing; dictation exercises for special needs of individual voices; selected technical exercises; English Ballads and Songs.

4, 5 6. **Second Grade.**—Breathing, tone placing, dictation exercises, with selected technical exercises from Marchesi, Bordesi, Navo, Panofka, Cocone; English Ballads and Songs; German Lieder.

7, 8, 9. **Third Grade.**—Breathing, tone placing, dictation exercises, with selected technical exercises from Bordesi, Marchesi, Sieber; English and Italian Songs; German Lieder; English Oratorio; Concert Songs.

10, 11, 12. Fourth Grade.—Dictation exercises, with selected technical exercises from Bordogni, Sieber, Marchesi, Lamperti, etc.; English Oratorio; Italian and German Operatic Selections; German Lieder; Concert Songs.

13, 14 15. Fifth Grade.—Dictation exercises with advanced technical exercises from Bordogni, Marchesi, Lamperti, Sieber, etc.; English Oratorio; Italian, French and German Opera; Bravura Singing.

Violin.

Mr. Spence.

1, 2, 3. First Grade.—Tour's "Primer;" exercises in the First Position; development of tone; Pleyel's duets, opus 8.

4 5, 6. Second Grade.—Schradieck's "Technical School," Book I; First, Second and Third Positions; Kaiser's "Studies," opus 20; Pleyel's duets, opus 48; Solos in First Position.

7, 8, 9. Third Grade.—Schradieck's exercises in the higher Positions; Kreutzer's Etudes; Pleyel's duets, opus 59; Fantasies by Singelee, Alard, etc.; Airs Varie DeBeriot.

10, 11, 12.—Fourth Grade.—First Part of Fiorillio's Etudes; Maza's duets, opus 71; Krommer's Etudes, opus 22; Concertos by DeBeriot; Solos by Hauser, Wienawski, etc.

13, 14, 15. Fifth Grade.—Fiorillio's Etude's continued; Fantasias by Vieuxtemps, Alard, etc.; Concertos by Mendelssohn, Beethoven, Bruch, Sarasate.

Advanced students may study ensemble works in conjunction with pupils from the Piano department. They are also admitted to the orchestra.

Guitar, Banjo and Mandolin.

Mr. Spence.

In response to the demand growing out of the popularity of these instruments, courses are offered in each. Special attention is given to the development of a systematic fingering for both hands, tone, touch and accurate execution.

Text-books for Guitar: Holland, Carcassi, Carulli, Sor.

Text-books for Banjo: Dobson, Stewart, Henning.

Text-books for Mandolin: "Branzoli's Method."

Wood and Brass Wind Instruments.

Mr. Hill.

EQUIVALENTS FOR THE FOREGOING.

The courses outlined for the various branches are simply intended to represent, in a general way, the character of each year's work. It is not intended that each student shall take all of the studies mentioned in the branch he wishes to pursue, and equivalents are liberally used to suit individual cases.

General Announcements.

Students may enter the School of Music at any time, but it is greatly to their interest to enter, as far as possible, at the beginning of the quarter.

There will be no deduction for lessons missed by students, except in cases of prolonged illness.

Sheet music is furnished,—the best publications only,—at cost.

Students entering the School of Music within the first three weeks of a quarter will be charged for the full quarter; after that time, for the remainder of the quarter, and one week additional.

Students of the School of Music are not allowed to take part in public programs, or in musical organizations, without the consent of their respective teachers, and the Director of the School of Music.

All music students are expected to attend the regular Students Recitals, and to take part in them whenever so assigned.

All music students are expected to identify themselves with the various musical organizations of the school, and are required to enter any to which they are assigned by the Director of the School of Music.

Every music student is expected to attend all concerts given under the auspices of the University.

It is expected that all students will take sufficient work,—literary, or music, or both—to occupy their entire time.

All correspondence regarding this department should be addressed to

RUSSELL McMURPHY,
Acting Director of the School of Music.
Morgantown, W. Va.

THE SCHOOL OF MILITARY SCIENCE AND TACTICS.

JAMES M. BURNS, Major U. S. Army, Commandant of Cadets and Professor of Military Science and Tactics.

Extract from Militia Law, State of West Virginia, 1901, sec. 100: "The Corps of Cadets of the West Virginia University shall be held as the Training School of the West Virginia National Guard, subject to such duty as the Commander-in-chief may order."

State cadets, to the number of 144, are appointed by the Regents of the University, and receive their uniforms, books, stationery, tuition, use of library, use of arms and equipments, and ammunition for target practice free. No charge is made for their admission. They constitute the public guard of the University and of the public property belonging thereto. In order to receive an appointment as state cadet a candidate must be between sixteen and twenty-one years of age, and must furnish evidence of good moral character. Application for a cadet appointment should be made to one of the Regents of the University. (See "Board of Regents," page 8). State cadets' term of enlistment is two years.

Students of the University who desire military instruction, and who are not state cadets, are allowed to join the corps as volunteer cadets. They receive no uniform from the state.

All cadets are required to wear a neat-appearing gray uniform at drill. This uniform may be worn with propriety on all occasions.

Officers of the regular army are specially detailed by the President of the United States, one to act as Commandant of Cadets, and one to make an annual inspection of the Corps.

Special Rewards for Military Excellence.

The names of the three most distinguished cadets are published annually in the official U. S. Army Register.

Gold and silver medals are awarded annually to cadets for special excellence.

Cadets who are recommended for promotion after graduation are entitled to commissions as officers, signed by the Governor of the state, and such commission entitles them to rank with other officers of the National Guard of West Virginia, according to grade and date of commission.

Armory.

The new Armory (60 by 120 feet) has been completed and in future will be used as a drill hall during inclement weather. This beautiful building will be the home of the Cadet Corps, and all entertainments given by them will be held therein, under the supervision of the Commandant of Cadets.

Administration and Instruction.

For the purpose of administration and drill the Corps of Cadets is organized as an infantry battalion. There is also an artillery detachment. Infractions of discipline are referred to a court-martial, consisting of cadet officers, for investigation. Cadets are divided into sections corresponding to their military proficiency and length of service. New cadets are required to enter the fourth (lowest) section, but those who have had previous military instruction may be transferred to a higher section upon passing a satisfactory examination.

The course of military instruction, practical and theoretical, is intended to fit all who graduate to perform efficiently the duties of officers in the National Guard of West Virginia. In addition to this, all cadets are taught that patriotism, punctuality, obedience, attention, alertness, and neatness are at all times expected of them. It is believed that the training a cadet receives fits him to become a good citizen as well as a good soldier. The qualities which go toward making the good officer are no less valuable, when considered in connection with the business man, professional man, or farmer. They are the qualities which ordinarily insure success in every walk of life. The excellent physical results which follow systematic military drill are well known and acknowledged by all competent judges.

The work in the military department requires about four hours each week. The winter term is devoted to Physical Training and recitations in tactics and other military subjects. The military course is the same as that of the West Point Military Academy, and when a cadet graduates he is qualified to pass an examination for a commission in the United States Army. This work is taken in connection with other University work.

Physical Training.

Beginning with the winter quarter a regulation suit will be required. This suit will consist of Turner pants, blue knit sleeveless shirt or jersey, and shoes with rubber or buck soles.

The regular course in Physical Training occupies four years, and is required of all young men in the Preparatory School, and of all members of the cadet corps. Cadets may be excused by the Commandant for sufficient reasons.

Course of Instruction.

The instruction of the various sections is as follows:

Fourth Section.

Practical Instruction: (a) Infantry drills in school of the soldier, squad, company, and battalion; extended order and ceremonies. (b) Guard duty as a sentinel. (c) Physical training in the gymnasium.

Theoretical Instruction: (a) Infantry Drill Regulations, paragraphs 1 to 248, and 502 to 601, inclusive. (b) The Manual of Guard Duty except paragraphs 331 to 373, inclusive. (c) The explanation of Cadet Regulations and General Orders, and the care of arms and accoutrements.

Third Section.

Practical Instruction: (a) Infantry drills, same as fourth section, except in school of soldiers. (b) Artillery dismounted battery and saber drills. (c) Guard duty as sentinels and non-commissioned officers. (d) Physical training in the gymnasium.

Theoretical Instruction: (a) Infantry Drill Regulations, paragraphs 249 to 367, 602 to 620, and 663 to 769, inclusive. (b) U. S. "Artillery Tactics," paragraphs 341 to 460, inclusive.

Second Section.

Practical Instruction: (a) Infantry drills same as third section. (b) Military signaling. (c) Small-arms firing, including the preparation of ammunition, position, and aiming drills, gallery practice and range firing. (d) Guard duty same as third section.

Theoretical Instruction: (a) Infantry Drill Regulations, paragraphs 368 to 499, and 621 to 662, inclusive. (b) Military signaling. (c) Small-arms Firing Regulations. (d) United States Army Regulations.

First Section.

Practical Instruction: (a) Infantry duties of grade attained. (b) Guard duty of grade attained. (c) Courts-martial. (d) Fencing.

Theoretical Instruction: (a) Minor tactics, including advance and rear guards, outposts, marches, field fortifications, riot duty, etc. (b) Military Law.

Band.

A band of twenty-six musicians has been authorized by the Board of Regents. These musicians must be volunteers and must enlist for two years. They are entitled to all the rights and privileges of State Cadets, and are governed by the same rules and regulations. They receive free of charge, tuition, uniforms, books, stationery, and instruction in band music.

Information for Applicants for Appointment to the Cadet Corps.

1. The applicant must not be under sixteen nor over twenty-one years of age.

2. He must be a bona fide resident of West Virginia.

3. He must be sound physically, of good moral character, and able to pursue successfully at least the studies of the first year of the Preparatory School.

4. He must make a deposit of $20.00 with the treasurer of the University as a guaranty that the state arms, etc., in his possession will be taken care of. The deposit will be returned to him at the end of his enlistment of two years, upon satisfactory settlement with the quarter-master.

5. He must make an average grade of not less than seventy each term on a scale of one hundred in order to hold his appointment.

6. Cadets are furnished with uniforms, text-books and stationery free of charge. They pay no fees whatever to the University. Their only necessary expenses are for room, boarding and laundry. If they are graduated from any department of the University while members of the cadet corps they are allowed to retain their text-books.

7. The work of the corps does not interfere with the student's scholastic duties. Cadets may take courses in any of the departments of the University.

8. A young man desiring an appointment should apply to the Regent for his county. The counties of the state are divided for cadet appointments as follows:

Regent C. M. Babb, Falls, W. Va.—Jefferson, Berkeley, Morgan, Hardy, Grant, Mineral, Hampshire.

Regent E. M. Grant, Morgantown, W. Va.—Monongalia, Preston, Tucker, Taylor, Pendleton, Barbour.

Regent J. R. Trotter, Buckhannon, W. Va.—Upshur, Lewis, Braxton, Nicholas, Pocahontas, Randolph, Webster.

Regent D. C. Gallaher, Charleston, W. Va.—Kanawha, Fayette, Summers, Greenbrier, Monroe, Raleigh.

Regent J. M. Hale, Princeton, W. Va.—Mercer, McDowell, Boone, Mingo, Logan, Wyoming.

Regent C. E. Haworth, Huntington, W. Va.—Cabell, Wayne, Lincoln, Mason, Roane, Putnam.

Regent J. B. Finley, Parkersburg, W. Va.—Wood, Calhoun, Wirt, Ritchie, Jackson, Clay.

Regent C. R. Oldham, Moundsville, W. Va.—Marshall, Wetzel, Tyler, Doddridge, Gilmer, Pleasants.

Regent W. J. W. Cowden, Wheeling, W. Va.—Hancock, Brooke, Ohio, Marion, Harrison.

Military Graduates and Distinguished Cadets, Reported at Commencement, June 20, 1901.

I. The following are announced as Distinguished Cadets, as prescribed by Par. 83, Cadet Regulations:

First Section.

Cadet Captain Clarence Poe, Artillery Officer.
Cadet Captain George H. Bayles, Co. "A."
Cadet First Lieutenant Ralph Rogers, Co. "C."

Second Section.

Cadet Second Lieutenant M. M. Neely, Co. "C."
Cadet Corporal Clyde E. Watson, Co. "B."
Cadet Corporal R. H. Killingsworth, Co. "C."

Third Section.

Cadet Corporal S. C. Carney, Co. "B."
Cadet Corporal E. U. Richards, Co. "B."
Cadet Corporal Madison Stathers, Co. "A."

Fourth Section.

Cadet Private W. A. Duggan, Co. "B."
Cadet Private W. F. Brown, Co. "C."
Cadet Private B. F. Sperow, Co. "A."

II. The following named cadets having successfully completed the course of instruction, are announced as graduates of the Department of Military Science and Tactics:

Poe, C.
Bayles, T. H.
Rogers, R.
Corbin, F. P.
Lang, T. S.
Alexander, C.
Hutchinson, F. D.
Cole, E. L.
Lewis, J. C.
Dodson, R.
Lucas, A. M.
Rogers, H. F.

III. Upon decision of the Board of Judges the Corps Colors for the ensuing year are awarded to Co. A.

IV. The medals offered by the Board of Regents are awarded as follows:

The Gold Medal for Drill and Discipline to Cadet Sergt. William E. Parsons, Co. B.

The Silver Medal for highest score at Target Practice to Cadet Corporal Clyde M. Watson, Co. B.

The Silver Medal for second highest score at Target Practice to Cadet Corporal E. U. Richards, Co. B.

A Sharpshooter's Cross is awarded to Cadet Corporal Clyde E. Watson, and Marksman's Buttons to Cadet Corporal E. U. Richards, Cadet Second Lieutenant M. M. Neely, and Cadet Corporal R. H. Killingsworth.

FIELD STAFF AND BAND.

Commandant, ...J. M. Burns, Major U. S. A.
Cadet Major, ...H. S. Lively.
Cadet Captain, Artillery Officer,...Ralph Rogers.
Cadet 1st Lieut. Adj.....H. L. Duval.
Cadet 1st. Lieut. Q. M.....R. H. Killingsworth.
Cadet 1st. Lieut. Chief Mus.....T. G. Hill.
Cadet 1st. Lieut. Signal Officer....W. W. Watkins.

Non-Com. Staff.

Sergeant Major .....E. U. Richards.
Quarter Master Sergeant .....J. E. Larew.

Ordnance Sergeant ..... C. A. Ellison.
Principal Mus. ..... J. V. Cooke.

Band.

Sergeants.

R. C. Crago,
G. C. Rhoades.
A. P. Freed.

Corporals.

A. L. Click,
H. H. Keener.

Privates.

S. H. Bridge.
A. R. Bloom.
E. B. Hopkins.
P. H. Marten.
F. W. Muldoon.
W. J. Ruble.
C. F. Maeten.
F. L. Mendenhall.
M. C. Moser.
J. B. Smith,
I. W. Umbell.

Company "A."

Captain, ... George H. Bayles.
1st. Lieutenant ..... Herbert W. Dent.
2nd. Lieut. ..... James C. Forquer.
1st. Sergeant, ... Richard W. Trapnell.

Sergeants:

Delbert T. Robinson.
Frank E. Flowers.
Clyde E. Watson.
Tom. B. Bowman.

Corporals:

John L. Jenkins.
Brown F. Sperow.
Ralph B. Fairfax.
William T. Brown.

Musicians:

Stenhope B. Crane.
Henry Woodward.

Privates:

Fleming W. Alderson.
Karl D. Byers.
Harold W. Campbell.
Carl C. Colcord.
Arthur T. Davenport.
William S. Downs.
Gilbert F. Endsley.
Alfonso Dils.
Henry H. Hess.
Howard H. Hott.
Charles F. Hoy.
Aaron Klein.
Jesse D. Lang.
Joseph W. Lyons,
John W. Mason.
Dana P. Miller.

John W. Fields.
George M. Fleming.
Donald H. Fleming.
A. Hartley Foreman.
James D. Gibson.
Earle D. Gould.
Benson P. Henritze.
S. Henderson.
Moses O. Millen.
Eugene D. L. P. McCormick.
Dwight E. McQuilkin.
George W. Price.
John Reese.
John W. Sutherland.
Fred G. Wood.
Frank Cliffs.

Company "B."

Captain, ...Clyde Alexander.
1st. Lieutenant, ...Sidney Shloss.
2nd. Lieutenant, ...Wm. E. Parsons.
1st. Sergeant, ...R. R. Hughes.

Sergeants:

H. J. Hervey.
W. R. Thurmond.
S. C. Carney.
H. W. Wamsley.

Corporals:

P. W. McMillan.
W. A. Duggan.
C. M. Bennett.
S. G. Moore.

Musicians:

J. F. Stone.
S. A. Smith.

Privates:

F. A. Burt.
G. F. Carskadon.
E. C. Colcord.
D. E. Cole.
O. W. Cowden.
J. R. Cook.
Thos. Davison.
E. L. Dudley.
H. Freidman.
J. B. Huyett.
A. Hill.
A. B. Kalbaugh.
H. G. Livesay.
C. Marsh.
M. W. McDonald.
E. A. Pabody.
G. L. Pence.
C. C. Patton.
F. A. Philps.
J. H. Richardson.
E. W. Reiley.
J. A. Riffe.
S. C. Steele.
H. Simms.
L. D. Sanders.
V. B. Scheer.
S. M. Stewart.
F. L. Shinn.
B. M. Whaley.
C. C. Watts, Jr.
F. A. Vassler.
J. F. Wright.

Company "C."

Captain .....Emmert L. Cole.
1st. Lieutenant. .....Dickson W. Parsons.
2nd. Lieutenant, ...William W. Smith.
1st. Sergeant, ...Daniel Dawson.

Sergeants:

William R. Shaw.
Addison D. Ellison.
Frank R. Yoke.
Thomas W. Haymond.

Corporals:

John T. West.
Jesse T. Dunbar.
Russell G. Millan.
William T. McCullough.
Henry M. Schrader.

Musicians:

Klein H. Graham.

Privates:

Karl C. Atkeson.
Elery C. Brown.
George H. Campbell.
Elwood C. Charnock.
George T. Faris, Jr.
German S. Hartley.
George E. Hervey, Jr.
Charles L. Hopkins.
Chauncey S. McNeil.
Lewis M. Mitchel.
Monroe Ownby.
Charles L. Pearcy.
Charles A. Phillips.
Charles H. Reinhart.
William E. Scott.
James V. Stewart.
John M. Trapnell.
Robert R. Vaughan.
Harold A. Voigt.
Clarence E. Vossler.
Charles E. Wells.
Arthur B. Willis.
Mayne R. Woodward.

THE COMMERCIAL SCHOOL.

Staff of Instruction.

THE FACULTY.

DENNIS MARTIN WILLIS, LL.B., Principal of the Commercial School, and Instructor in Bookkeeping and Shorthand.

ELIZABETH LEE WHITESCARVER, Instructor in Shorthand and Typewriting.

Other Instructors Giving Courses in This School.

THOMAS CLARK ATKESON, Ph.D., Dean of the College of Agriculture, and Professor of Agriculture.

OKEY JOHNSON, A.M., LL.B., Dean of the College of Law, and Professor of Constitutional, International and Corporation Law.

WILLIAM P. WILLEY, A.M., Professor of Commercial Law.

ALEXANDER REID WHITEHILL, Ph.D., Professor of Chemistry.

SAMUEL B. BROWN, A.M., Professor of Geology and Mineralogy.

JAMES SCOTT STEWART, M.S., Professor of Mathematics.

THOMAS EDWARD HODGES, A.M., Professor of Physics.

CHARLES HENRY PATTERSON, A.M., Professor of Rhetoric and Elocution and Acting Head of the Department of English.

LLOYD LOWNDES FRIEND, A.M., Instructor in English.

WILLIAM EARL RUMSEY, B.S.Agr., Instructor in Botany.

The Commercial School.

This School was established in 1895, the object being to prepare young men and women for practical business life, and to give to students in other departments of the University an opportunity to study the subjects taught in this School. Students in the College of Arts and Sciences, the College of Law, and the other departments of the University may take any of the work outlined in the Commercial School without additional fees.

The instruction in the Commercial course is given in connection with the work done by the professors in the other departments of the University, the curriculum being articulated with the other courses.

Students are permitted to make arrangements by which they can take special courses in Bookkeeping, Shorthand and Typewriting, thus preparing themselves to act as secretaries, amanuenses, assistants in business offices, court reporters, etc. The special advantages include a thorough course in English and an acquaintance with the routine work and technicalities of business.

A certificate will be granted to students who complete the courses and pass the required examinations and tests.

Fees.

Tuition is free to West Virginia students. To students from other States, the tuition in the Commercial School is $5.00 per quarter—twelve weeks.

The matriculation fee is $5.00, payable upon entering the University by all students. Unless a student remains out of school for more than three years the matriculation fee is paid but once by each student.

The contingent fee of $2.50 for each quarter, is payable at the beginning of the quarter.

A typewriter fee of $1.00, payable at the beginning of each quarter, is charged each student for the use of the typewriter during the quarter.

The total University charge during the first quarter for students from West Virginia in the Commercial School amounts to $7.50, and each succeeding quarter $2.50. State cadets are furnished with books, stationery and uniforms free, and are not required to pay any fees.

Requirements for Admission.

The requirements for admission are as follows:

1. History:
   (a) General History,—Myers, or an equivalent.
   (b) United States History,—Fiske, or an equivalent.
2. English:
   (a) Spelling, punctuation and paragraphing.
   (b) English Grammar completed, with ability to write good English;
   (c) Reed & Kellogg's Grammar completed, or an equivalent.
3. Mathematics:
   (a) Arithmetic completed,—Greenleaf's, or an equivalent;
   (b) Algebra,—Milne's "High School Algebra," or an equivalent.

4. Elementary Science:
   (a) Physical Geography;
   (b) Human Anatomy and Physiology,—Cutter's, or an equivalent.
5. Civil Government:
   Fiske's, or an equivalent.

Requirements for the Two Years Commercial Course.

Chemistry,	1 course;
English,	6 courses;
Commercial Geography,	1 course;
Economics,	1 course;
Botany,	1 course;
Freehand Drawing,	1 course;
Bookkeeping,	2 courses;
Commercial Law,	3 courses;
Bank Accounting,	1 course;
Shorthand,	3 courses;
Typewriting,	2 courses;
History of Commerce,	1 course;
Physics,	1 course;
Geology,	1 course.
	25 courses.

DEPARTMENTS OF INSTRUCTION.

The studies that are taught in this department are the only courses described here. See the announcements of the Preparatory School and the College of Arts and Sciences for a description of the culture courses.

Bookkeeping.

Mr. Willis.

1. **Business Practice.** This is an introductory course, consisting of business practice and extensive drills in the use of vouchers, files, and in journalizing, posting, etc. In this course the student familiarizes himself with all the elementary rules and fundamental principles of bookkeeping. The student, in doing this work, is engaged as a bill clerk, shipping clerk, warehouseman, secretary, and bookkeeper for a firm doing a general merchandising business.

Text-book, "Office Routine and Bookkeeping." Prerequisites, Penmanship, Commercial Arithmetic, or an equivalent.

Fall, Winter, and Spring, 8:30; 24 U.

2. **Office Work and Accounting.** This course is a continuation of Course 1, the student becoming a member of the firm, and general manager and bookkeeper. There are frequent drills in making inventories of the property and resources and liabilities, financial statements, balances and balance sheets, etc. The student is required to write all articles of agreement, deeds, mortgages, bills of sale, etc. The adjustment of losses and the settlements with insurance companies after a fire is a special feature of this course. Changing the firm and the kind of business, etc., and changing from double to single entry bookkeeping. Text-book, "Office Routine and Bookkeeping."

Fall, Winter, and Spring, 8:30; 24 U.

3. **Special Accounting.** A theoretical course in keeping the accounts in special lines of business, as lumber, shipments and consignments, commission and shipping, jobbing, installments, railroad bookkeeping, etc. This is an advanced course which is not required in the regular Commercial Course. Text-book, "Advanced Bookkeeping," Williams and Rogers. Prerequisites, Bookkeeping 1 and 2.

Fall, Winter, and Spring, 8:30; 24 U.

4. **Bank Accounting.** A complete course in bank accounting and practice, consisting of working in the bank as teller, bookkeeper, etc.; and the theoretical work as outlined in the text. This is the system that is universally used in the banks of this country and approved by the National Bankers' Association. Prerequisites, Bookkeeping 1 and 2. "New Banking," Williams and Rogers.

Fall, Winter, and Spring, 8:30; 24 U.

Shorthand.

Mr. Willis and Miss Whitescarver.

1. **Theory.** This course includes the basis and fundamental principles of the art. Special attention is given to accuracy in the execution of the consonants. Thorough drills are given in the use of vowels and vowel positions. Introduction of word signs and special phrasing from day to day, and cumulative principles, modifications of consonants and affixes, as outlined in Dement's "Pitmanic Shorthand," to page 88. Prerequisite, English 3.

Fall, 9:30; Winter, 10:30; Spring, 11:30; 24 U.

2. **Cumulative Phrasing.** This course is a continuation of Course 1. Cumulative principles and affixes are introduced in their natural order. Following this, cumulative phrasing, which consists in the indication of the omission of words by special use of the principles given in Course 1. Special contractions and special phrasing, etc. This work will be presented in the order given in Dement's "Pitmanic Shorthand," pages 88 to 232. Fall, 11:30; Winter, 9:30; Spring, 10:30; 24 U.

3. **Speed Practice and General Dictation.** Letter writing, speed practice, and writing after general dictation. Writing testimony and argument will be a special feature in the course. Special attention is given to each individual student in this course in order to prevent speed practice from destroying accuracy of notes, etc. Most of the dictation and reading exercises are to be found in Dement's "Dictators," Nos. 1, 2, 3, 4. Fall, 10:30; Winter, 11:30; Spring, 9:30; 24 U.

4. **Court Reporting.** This is a special course in court reporting given to students who have completed Courses 1, 2, and 3. This work is given in connection with the moot courts in the College of Law. The student is appointed court stenographer by the judge of the court, and reports the cases tried in that court and in the justices' courts of the same department. Duplicate reports are submitted for inspection. This gives the student actual practice in court reporting, as required by the West Virginia law. In addition to this actual practice daily drills are

given to acquire speed in writing and transcribing testimony, etc. Brown's "Court Reporting" is used as a text-book.

Winter, and Spring, 2:00 to 4:00.

Penmanship.

Mr. Willis.

1. **Penmanship.** This is a course of plain business writing. Students are required to eliminate all unnecessary flourishes and to reduce their writing to a rapid, plain and abbreviated style of penmanship. They are permitted to use either the vertical or slant writing. The modern and improved methods of instruction are used, with Palmer's "Penmanship Budget," as a guide. Fall and Winter; 24 U.

Typewriting.

Miss Whitescaver.

1. **Typewriting.** The "Smith Premier" machine is used for instruction and practice. The instruction includes thorough drills on the various exercises outlined in the text. This furnishes the student with a knowledge of the mechanism of the machine, which is essential in its adjustment. Text-book, Barnes' "Touch Typewriting."

Fall, Winter, Spring, 8:30 A. M. till 4 P. M.

Commercial Law.

Dean Johnson and Professor Willey.

1. **Contracts.** The object of this course is to group, set in order and illustrate the entire elementary doctrine of the law of contracts in such a manner as to render obvious their application in practice. This course is given by lectures, with assigned readings from a prescribed text-book, and law reports. Professor Willey. Fall, 9:30; 14 U.

2. **Negotiable Paper.** This course deals with the law of negotiable paper, beginning with the origin of negotiability, and showing the mode and practice of Law Merchant, and the effect the various statutes have had upon them. The mode of instruction is by lectures, being the same lectures taken by students of the LL.B. course, and by assigned cases to be read as authority.

Professor Willey. Half course. Winter, 9:30; 14 U.

3. **Bailments and Suretyship.** The work in the course embraces the law of bailments, which to-day is the great factor in commerce, and the law of guaranty and suretyship, and the law of insurance. Instruction is given by lectures, quizzes and assigned readings.

Professor Willey. Half course. Winter, 9:30; 14 U.

4. **Agency.** This is a course in the law of agency. The course covers the principles that govern the relations of principal and agent, and of their authority, and what constitutes revocation, etc. Instruction is given by lectures, quizzes and assigned cases to be read.

Dean Johnson. Half course. Spring, 9:30; 11 U.

Commercial Geography and History.

Professor Atkeson.

1. **Commercial Geography.** A description of the surface of the earth, with special reference to the production, manufacture, transportation, and exchange of articles of trade. A general outline of the countries of the world, soil, climate, agricultural products, forests, manufactories, quarries, mines, centers of industry, foreign relations, ways of communication, social relations and conditions, imports, exports, and markets. Special attention is given to the study of the United States, area, climate, position, population, natural resources, raw products, manufactures, waterways, railways, seaports, exports, imports, reasons for rapid growth of Western cities, industrial possibilities. Text-book, Adams' "Commercial Geography."

Half course. Fall, 10:30; Winter, 11:30; A.

2. **History of Commerce.** History of Commerce; methods of exchange in ancient times; shipping of the ancients; fairs and markets; results of maritime discoveries; changing the commercial routes; international treaties affecting commerce; scientific and industrial discoveries affecting commerce; trade restrictions; consuls and modern commerce; boards of trade; stock and produce exchanges; modern transportation; freight express companies; insurance; modern modes of preparing and shipping articles of merchandise; circulation of commodities between cities and countries; trade statistics; dependence of manufactures upon producers of raw material; nomenclature of commerce. Text-book, Adams' "History of Commerce."

Fall, 10:30; Winter, 11:30; A.

THE PREPARATORY SCHOOLS.

The Preparatory School at Morgantown.

STAFF OF INSTRUCTION.

The Faculty.

ALFRED JARRETT HARE, A.B., Principal and Professor of the Latin Language and Literature.
LLOYD LOWNDES FRIEND, A.B., Instructor in English.
DANIEL WEBSTER OHERN, A.M., Instructor in Greek.
BERTHA CLELAND BROWNING, A.B., Assistant.
CLARENCE POE, A.B., Assistant in History.

Other Instructors Giving Courses in this School.

ALEXANDER REID WHITEHILL, Ph.D., Professor of Chemistry.
SAMUEL B. BROWN, A.M., Professor of Geology and Mineralogy.
JAMES SCOTT STEWART, M.S., Professor of Mathematics.
THOMAS EDWARD HODGES, A.M., Professor of Physics.
RICHARD ELLSWORTH FAST, LL.B., Ph.B., Professor of American History and Political Science.
FREDERICK WILSON TRUSCOTT, Ph.D., Professor of Germanic Languages and Literatures.
JOHN BLACK JOHNSTON, Ph.D., Professor of Biology.
JAMES MADISON BURNS, Major U. S. Army, Professor of Military Science and Tactics and Commandant of Cadets.
CHARLES CHOLLET, A.B., Professor of Romance Languages and Literatures.
LUCY CELESTE DANIELS, Ph.M., Associate Professor of European History.
WILLIAM A. CALDWELL, M.D., Assistant Professor of Anatomy and Physiology.
JASPER NEWTON DEAHL, A.M., Assistant Professor of Education.
EVA EMMA HUBBARD, Instructor in Drawing and Painting.

WILLIAM JACKSON LEONARD, Instructor in Fine Arts.
KARY CADMUS DAVIS, M.S., Ph.D., Instructor in Botany and Horticulturist of the West Virginia Agricultural Experiment Station.
ALLEN WILSON PORTERFIELD, A.M., Assistant in German.
CHARLES COLLIER HOLDEN, A.B., Assistant in Romance Languages.
WILLIAM HENRY WHITHAM, A.M., Assistant in Physics and Geology.

Purpose.

The Preparatory School is maintained to fit young men and young women for the various courses of the University, and it offers excellent opportunities for both mental and moral development under helpful guidance. Those who have not the advantages of an academy or good high school near home may here receive instruction in any of the common branches. Many of the young men in this school are enrolled in the Cadet Corps, and the habits of neatness, accuracy, and mental and bodily discipline inculcated therein are an invaluable part of a young man's training.

Students who are deficient in only one or two branches of this School may, while finishing this work, take some College studies. But all of the required work of the Preparatory course must be completed before a student is permitted to go on regularly into any University course. Those who do not expect to take a course in the University will be given such studies in the Preparatory School as they are able to pursue profitably.

Admission.

For admission to this School applicants must be at least fifteen years of age, and they should present a certificate of scholarship from their last instructor or the last school with which they were connected. They should be proficient in the ordinary course of study pursued in the public schools of the state, and especially in English grammar and arithmetic. No regular examination is required for admission to the classes of the first year, the student being admitted on trial; if he is not able to pursue the course successfully, he is required to withdraw. Students desiring to take the studies of the second, third or fourth Preparatory year will present certificates of work done elsewhere or will be examined as to their ability to enter the classes of that year.

Co-Education.

Young men and young women are admitted on equal terms.

DEPARTMENTS OF INSTRUCTION.

Botany.

Dr. Davis.

2. **Ecology of Fall Plants.** This course consists of field and laboratory study of our most common fall-blooming plants, with reference to their inflorescence, multiplication, preparation for winter, and other ecological points. Fall; 30 U.

3. **Ecology of Spring Plants.** The work in this course is similar to that of the fall term, but deals with spring-flowering plants. Both the courses are conducted with the use of a special Ecological blank, in which twenty-five or more questions are asked concerning the plant. Spring; 30 U.

English.

Mr. Friend and Miss Browning.

1. **Grammar and Composition.** This, with the two following courses, involves a practical drill in orthography, punctuation and the principles of grammar. Frequent exercises in oral and written compotion are required.

Fall, first section, 8:30; second section, 9:30; 10 M.

2. **Grammar and Composition.** Continuation of Course 1.

Winter, first section, 8:30; second section, 9:30; 10 M.

3. **Grammar and Composition.** Continuation of Course 2.

Spring, first section, 8:30; second section, 9:30; 10 M.

4. **Composition and Rhetoric.** In this and the three following courses, careful drill in composition is continued, embracing a study of the sentence, the paragraph, and the theme; and of diction, the figures of speech, and the important forms of prose and poetry. In each of these courses one of the English or American classics is studied closely in class, and book reviews and outlines are prepared on other required readings. Fall, first section, 10:30; second section, 11:30.

5. **Composition and Rhetoric.** Continuation of Course 4.

Winter, first section, 10:30; second section, 11:30.

6. **Composition and Rhetoric.** Continuation of Course 5.
Spring, first section, 10:30; second section, 11:30.

7. **Composition and Rhetoric.** Continuation of Course 6.
Fall, first section, 10:30; second section, 11:30.

8. **American Literature.** In this course representative selections from the writings of the leading American authors are studied. So far as practicable this work in literature is made to illustrate and enforce the knowledge already gained from the study of rhetoric. Critiques and reviews are continued in this and the following course.
Winter, first section, 10:30; second section, 11:30.

9. **English Literature.** In course 9, selections from the writings of a few of the leading British authors are studied. The work is done as in course 8. Spring, first section, 10:30; second section, 11:30.

French.

Professor Chollet and Mr. Holden.

1. **Elementary Course.** Grammar, reading and practice in pronunciation and oral understanding. Chardenal's Complete French Course; Bocher's Otto's French Reader.
Fall, first section, 8:30; 11 U; second section, 11:30; 11 U.

2. **Elementary Course.** A continuation of course 1. Chardenal's Complete French Course; Bocher's Otto's French Reader.
Winter, first section, 8:30; 11 U; second section, 11:30.

3. **Elementary Course.** A continuation of course 2. Chardenal finished; Bocher's Otto's French Reader.
Spring, first section, 8:30; 11 U; second section, 11:30.

It is expected that in courses 1, 2, and 3, the elements of French Grammar will be mastered, and a fair pronunciation and oral intelligence acquired.

4. **Fiction of the Nineteenth Century.** Works by Daudet Dumas, Andre Theuriet, George Sand, etc. Grandgent's Composition. Oral Practice, exercises in dictation continued through courses 5 and 6. For students who have had one year of French. Fall, 10:30; 11 U.

5. **La Fontaine and His Fables.** Oral and written narration, conversation. Text-book: Fables de La Fontaine, edited by Gernsez, published by Hachette et Cie. Winter, 10:30; 11 U.

6. **Prose Reading on the Seventeenth Century.** One of Moliere's plays in prose. Grandgent's Composition. Spring, 10:30; 11 U.

German.

Professor Truscott and Mr. Porterfield.

1. **Elementary German.** A course for beginners, the object being to acquaint the student with the elements of the grammar, to give him a reading knowledge of the easiest German prose, and as much practice as possible in pronunciation. Thomas' "Grammar," Part 1; Super's "Elementary German Reader," Part I.

Fall, first section, 9:30; second section, 10:30; 19 U.

2. **Elementary German.** A continuation of Course 1. Reading of easy prose and poetry. Several poems will be memorized and special attention given to correct pronunciation. Super's "Elementary Reader," Parts II, III, IV; Leander's "Traeumereien." Hervey's Exercises to Thomas' "Grammar."

Winter, first section, 9:30; second section, 10:30; 19 U.

3. **Elementary German.** A continuation of Course 2. Reading, dictation and conversation. Elementary work in composition, accompanied by a review of the main points of the grammar and a special study of the irregular verbs. "Immensee;" "Hoher als die Kirche;" "L'Arrabbiata" (Lentz' edition); Hervey's Exercises to Thomas' "Grammar." Spring, first section, 9:30; second section, 10:30; 19 U.

4. **German Prose.** Rapid reading of a large amount of prose by modern authors to render the student familiar with the idioms of the language and give a large and varied vocabulary. Nichol's "Three German Tales;" Bernhardt's "Novelletten-Bibliothek," vol I.

Fall, 8:30; 19 U.

5. **Composition.** Practice in writing German and translation of English prose into German. Discussion of grammatical points in connection with the translation. Study of the irregular verbs. Dictation. Reading at sight. Harris' "Prose Composition;" Thomas' "Grammar," Part II. Winter, 8:30; 19 U.

6. **German Poetry.** Translation of two long poems. Reading and memorizing a great number of short well-known poems. Von Klenze's "Deutsche Gedichte;" "Herrmann und Dorothea" (Hatfield); "Trompeter von Saekkingen." (Frost). Spring, 8:30; 19 U.

Greek.

Professor Green and Mr. Ohern.

1. **White's First Greek Book (Chapters I-XL).** This course is for beginners. The work covers pronunciation, accent, declensions, and conjugations, etymology of words, and simple translations from Greek

into English and from English into Greek to illustrate the principles of grammar as given in the text. Fall, 9:30; Spring, 8:30; 8 M.

2. **First Greek Book (Completed).** This is a continuation of Course 1. Prerequisite, Greek 1. Fall, 10:30; Winter, 9:30; 8 M.

3. **Xenophon's Anabasis (Book 1).** Study of connected discourse and syntax. Prose composition once a week. Texts, Goodwin and White's "Xenophon's Anabasis;" Goodwin's "Greek Grammar;" Pearson's "Greek Prose Composition." Prerequisites, Greek 1 and 2.
Fall, 11:30; Winter, 10:30; Spring, 9:30; 8 M.

4. **Xenophon's Anabasis (Books II, III, and IV).** Prose Composition once a week. A study in forms of Greek narrative. A fuller knowledge of the grammar is required. Prerequisites, Greek 1, 2, and 3. Goodwin's "Xenophon's Anabasis;" Goodwin's "Greek Grammar;" Pearson's "Greek Prose Composition."
Fall, 8:30; Winter, 11:30; Spring, 10:30; 8 M.

5. **Lysias' Orations.** Prose composition once a week. A study of the form of Greek orations and Lysias' style. Collateral library work assigned to each student. Prerequisites, Greek 1, 2, 3, and 4, or their equivalent. Winter, 8:30; Spring, 11:30; 8 M.

6. **Homer's Iliad or Odyssey (Books I, II, and III) and Homeric Verse.** All the text is read metrically, and passages are memorized. Etymology, Mythology, and Prosody receive special attention. Seymour's "Iliad." Collateral reading: Jebb's "Introduction to Homer," Gladstone's "Time and Place of Homer." Prerequisites, Greek 1, 2, 3, 4, 5. Spring, 8:30; 14 U.

History.

Professor Fast, Associate Professor Daniels and Mr. Poe.

1. **History of Greece.** An outline study of Greek history with special reference to the development and peculiar characteristics of Greek civilization. Fall, 8:30; 4 M.

2. **History of Rome.** An outline study of Roman history from the founding of Rome to 476 A. D. Winter, 8:30; 4 M.

3. **History of the Middle Ages.** In this course, the history of the period between ancient and modern times will be broadly sketched, and a study made of the institutions peculiar to the middle ages.
Spring, 1903, 8:30; 4 M.

4. **Modern European History.** This course will trace the history of Europe in the last four centuries, special attention being given to

the period of religious reformation, and to the series of revolutions which have established the present state systems.

Spring, 1904, 8:30; 4 M.

Courses 1, 2, 3, and 4 are intended to give a general view of European history, and are recommended to all students planning to take college courses in history.

5. **History of England.** This course will outline the history of England from the Teutonic settlement to the present time. It is intended chiefly as an introduction to the college courses in English history, but it will serve also to give a general view of the subject to students not planning to take the advanced work.

Fall, 9:30; 4 M.

6. **Outlines of United States History.** A general course of narrative and political history required for admission to all other courses in United States history. Fiske's "History of the United States."

Winter, 9:30; 4 M.

Latin.

Professor Hare.

1. **Etymology.** Chase and Stuart's "First Year in Latin," pages 9-125. Fall, 8:30 and 11:30; Spring, 8:30; 11 M.

2. **Syntax.** Chase and Stuart's "First Year in Latin," pages 126-200. Winter, 8:30 and 11:30; 11 M.

3. **Oratorio Obliqua, and Caesar (Book I., chs. 1-29).** Chase and Stuart's "First Year in Latin," completed. Spring, 11:30; 11 M.

4. **Caesar's Gallic War (Books I and II).** Fall, 10:30; 11 M.

5. **Caesar's Gallic War (Books III and IV).** Winter, 10:30; 11 M.

6. **Cicero's Orations against Catiline, I, II, and III.** Spring, 10:30; 11 M.

7. **Cicero's Third Oration against Catiline, the Oration for Archias, and the Aeneid of Virgil begun.** Fall, 9:30; 11 M.

8. **Virgil's Aeneid (Books I, II, and III).** Winter, 9:30; 11 M.

9. **Virgil's Aeneid (Books IV, V, and VI).** Spring, 9:30; 11 M.

Moulton and Collar's Preparatory Latin Composition is used once a week during Courses 7, 8, and 9.

Allen and Greenough's "Latin Grammar," Revised Edition, is used in Courses 4-9.

The prerequisite for any course is each of the preceding courses.

No student should attempt to study Latin until he has credit for English Grammar.

Mathematics.

Professor Stewart and Assistants.

Algebra.

1. **Algebra, to Highest Common Divisor.** Milne's Academic Algebra to page 115. Fall, 10:30; Spring, 8:30.

2. **Algebra, to Involution.** Milne's Academic Algebra to page 214. Winter, 10:30.

3. **Algebra, to Ratio and Proportion.** Milne's Academic Algebra, to page 325. Spring, 10:30; Fall, 11:30.

4. **Algebra.** Simple Equations, Discussion of Problems, Zero and Infinity, Inequalities, Involution, Evolution, Theory of Exponents, Radicals, Quadratic Equations, Arithmetical and Geometrical Progressions, to Undetermined Coefficients. Well's University Algebra, pages 103-304. Fall and Spring, 8:30.

Geometry.

5. **Plane Geometry, Rectilinear Figures and the Circle.** Well's Plane Geometry, Books I and II. Fall, 9:30.

6. **Plane Geometry, completed.** Well's Plane Geometry, Books III to V. Winter, 9:30.

Physics.

Professor Hodges and Mr. Whitham.

1. **Elementary Physics.** Recitations, supplemented by experiments and laboratory exercises. One hour per week at least will be devoted to individual laboratory work. Thwing's Elementary Physics. Prerequisite, Plane Geometry 1. Fall, 11:30; 11 S. Laboratory hours to be arranged.

2. **Elementary Physics.** Continuation of Course 1. Winter, 11:30; 11 S.

Courses 1 and 2 will satisfy the entrance requirements in Physics.

Physical Geography.

Professor Brown.

An elementary course for which no credit is given toward a college degree. Fall, 10:30; 30 S.

Physiology.

Professor Caldwell.

1. **Elementary Physiology.** Fall, Spring, 9:30.

2. **Elementary Physiology.** Continuation of Course 1. Winter, 9:30.

Zoology.

Professor Johnston.

1, 2, and 3. **General Zoology.** The aim of these courses is to acquaint the student with the chief types of animal structure and with the general principles of biology.

Two-thirds course. Fall, Winter, Spring.
Lectures, M., at 8:30.

Laboratory work, five hours per week, Tu., Th., and F., A. M., or M., W., P. M.

4. a, b, and c. The Evolution of Animal Life. Lectures and demonstrations with assigned reading and written reports. To accompany Courses 1, 2 and 3. One-third course, Fall, Winter, Spring.
Lectures, W., at 8:30.

THE PREPARATORY SCHOOL AT MONTGOMERY.

Staff of Instruction.

JOSIAH KEELY, A.B., Principal.
A. G. McCHESNEY, A.M., Latin and Literature.
DRUSILLA V. JOHNSON, A.B., Greek and Mathematics.
HANNAH L. JONES, A.B., German and English.
MARIAN F. CABELL, Instrumental Music and French.

General Information

The Preparatory School of the West Virgniia University at Montgomery, in Fayette county, was established under the provisions of an Act of the Legislature, passed February 16, 1895. The Montgomery heirs donated two acres of ground for the erection of suitable buildings, and, on January 4th, 1897, the school was opened to students.

The Superintendent of Schools and two regents chosen from among the regents of the University exercise control, though the full board may decide on matters of importance.

The President of the University is ex officio president, and the course of study at Montgomery is subject to his approval, being confined strictly to the regular preparatory work and to such work in the common branches as is absolutely necessary for the study of the higher branches.

The dormitory feature is perhaps its strongest claim on the patronage of the more immature students of the state.

Board at the dormitory is ten dollars per calendar month. Rooms are furnished by the state.

STUDENTS

Graduate Students

Atkeson, Thomas Zephaniah, ...Buffalo.
B.Agr., West Virginia University, 1899; B.S.Agr., ibid., 1900.

Browning, Bertha Cleland, ...Wellsburg.
A.B., West Virginia University, 1901.

Chapman, Alexander Campbell, ...West Alexander, Pa.
B.S., Bethany College, 1898.

Brooke, Charles Frederick Tucker, ...Morgantown.
A.B., West Virginia University, 1901.

Conway, Wickliffe Melbourne, ...Bristol.
Ph.B., Albion College, 1897.

Gorman, Michael Eugene, ...Morgantown.
A.B., West Virginia University, 1895.

Hughes, Alvaroe Glenn, ...Ravenswood.
A.B., West Virginia University, 1900.

John, Wm. Scott, ...Rosedale, Pa.
A.B., West Virginia University, 1900.

Johnson, Sarah Waugh, ...Morgantown.
A.B., West Virginia University, 1901.

Kenna, Edward Benninghaus, ...Charleston.
A. B., St. Mary's College, 1897.

Lardin, Frank Miller, ...Masontown, Pa.
A.B., West Virginia University, 1901.

Lewis, Ernest Daniel, ...Johnstown.
A.B., West Virginia University, 1901.

McWhorter, Charles Nathan, ...Lewisburg.
A.B.L., West Virginia University, 1901.

Moreland, Eleanor Brown, ...Morgantown.
A.B., West Virginia University, 1898.

Moreland, James Rogers, ...Morgantown.
A.B., West Virginia University, 1901.

Neely, Matthew Mansfield, ...Smithton.
A.B., West Virginia University, 1901.

Nelson, J. Frank, ...Morgantown.
B.S., West Virginia University, 1897.
Poe, Clarence, ...Grafton.
A.B., West Virginia University, 1900.
Roberts, Lillian Ashford, ...Moundsville.
A.B., Bethany College, 1900.
Shriver, Ross Chalfant, ...Wadestown.
A.B., West Virginia University, 1901.
Smith, Simeon Conant, ...Morgantown.
A.B., Tufts College, 1898.
Snyder, Alvan Goshorn, ...Charleston.
A.B., Washington and Lee University, 1898.
Trotter, James Russell, ...Buckhannon.
A.B., West Virginia University, 1891.
A.B., Harvard University, 1895; A.M., ibid., 1896.
Wallace, Ira Melvin, ...Morgantown.
A.B., Thiel College, 1894.
Warman, Altha, ...Morgantown.
A.B., West Virginia University, 1893.
Willey, Chauncey DeWitt, ...Morgantown.
A.B., West Virginia University, 1901.

—26.

The College of Arts and Sciences.

Seniors.

Bowman, Frank Lewellen, ...Charleroi, Pa.
Boyd, Robert Hanson, ...Martinsburg.
Brown, Robert Morrow, ...New Cumberland.
Casto, Dorr Clayton, ...Parkersburg.
Cobun, Linnie Belle, ...Morgantown.
Duval, Harding LeMoyne, ...Wellsburg.
Freshwater, Philip, ...Penrith.
Hubbard, Beulah Brock, ...Morgantown.
Keener, Hayes Harold, ...Morgantown.
Lively, Henry Shaw, ...Weston.
Miller, Irene, ...Alderson.
Miller, Jacob Frank,.....Oldframe, Pa.
Miller, Frances Livermore, ...Monongah.
Miller, Lawrence Paxton, ...Alderson.
Miller, Alexander McVeigh, ...Alderson.
Morris, Hortense, ...Harrisville.
Parsons, William Ewin, ...Morgantown.

Provence, Leana Hague, ...Greensboro, Pa.
Russell, Grace Lilian, ...Skowhegan, Me.
Sanders, Mary Virginia, ...Maidsville.
Sennett, Maude Savilla, ...Morgantown.
Shloss, Sidney, ...Morgantown.
Smith, William Winfred, ...Morgantown.
Stalnaker, Elizabeth Mattingly, ...Martinsburg.
St. Clair, Harry Alonzo, ...Stewartstown.
Utt, DesMoines, ...Morgantown.
Watkins, William Merle, ...West Grafton.
Wertz, Edna Earl, ...Huntington.
Yager, Mary Louise, ...Wheeling.
—29.

Juniors.

Alexander, Clyde, ...Morgantown.
Baumgardner, Wm. Michael, ...Elk Lick, Pa.
Beall, Clarence Hough, ...Elk Lick, Pa.
Bennett, Lawrence Edward, ...Ireland.
Bitner, Leila Henkel, ...Kearneysville.
Conaway, Oran B., ...Alma.
Cook, Jean Valjean, ...Morgantown.
Corbin, Blanche, ...Fairmont.
Cox, Boaz Baxter, ...Morgantown.
Crago, Eva Laura, ...Wheeling.
Craig, Georgia Phillips, ...Shippensburg, Pa.
Dawson, Daniel, ...Charleston.
Green, Robert Rodman, ...Morgantown.
Herod, Francis Clyde, ...Dunkard, Pa.
Hervey, Henry Jacob, ...Morgantown.
Kunst, Frank Batson, ...Pruntytown.
Largent, Robert Joseph, ...Paw Paw.
Leech, Fannie May, ...Morgantown.
Mendenhall, Frederic Leonard, ...Canton, China.
Miller, Dwight Edmond, ...Fairmont.
Morgan, Lily Sarah, ...Rivesville.
Peck, Herbert Cromwell, ...Philippi.
Purinton, John Alden, ...Morgantown.
Robinson, Delbert Thomas, ...Grafton.
Shaw, William Roy, ...Terra Alta.
Trapnell, Richard Watkins, ...Charles Town.

Waugh, Frances Bell, ...Wellsburg.
Yoke, Frank Roy, ...Morgantown.
—28.

Sophomores.

Albig, W. Espey, ...Scottdale, Pa.
Ambler, Charles H., ...St. Marys.
Bowman, Thomas A. B., ...Valley Furnace.
Brown, Lucie Sara, ...New Cumberland.
Colbert, Ada Rebecca, ...Martinsburg.
Collett, Albert Jackson, ...Beverly.
Cotton, Reardon Stewart, ...Pittsburg, Pa.
Cutts, Harriet, ...Montgomery.
Dent, Herbert Warder, ...Grafton.
Duke, Walter McGarry, ...Bakerton.
Goff, Minnie Lee, ...Glenville.
Hall, Emily Elizabeth, ...Keyser.
Harr, Levi B., ...Fairmont.
Hill, Thomas Getz., ...Frostburg, Md.
Jackson, James Henry, ...Jane Lew.
Jones, Bettie Cook, ...Morgantown.
Lawrence, Benjamin Franklin, ...Bluefield.
Martin, Nella, ...Parkersburg.
McCullough, William Turner, ...Charleroi, Pa.
McMillen, Russell Hennen, ...Masontown.
Moore, Solomon Granville, ...Belington.
Potts, Emma Margaret, ...Huntington.
Purinton, Mary Lyon, ...Morgantown.
Reinhart, Charles Hugh, ...Shepherdstown.
Rhoades, George Carroll, ...Morgantown.
Richards, Frederick Franklin, ...New Cumberland.
Scott, William Emmett, ...Lewisburg.
Snyder, Louis C., ...Laurel Point.
Tapp, Elizabeth Louise, ...Morgantown.
Wilson, Mary Brent, ...Morgantown.
Williams, Howard Elmer, ...Duo.
—31.

Freshmen.

Brittingham, Philip Shearer, ...Wheeling.
Buchanan, Joseph Kerr, ...Morgantown.
Carney, Samuel Clyde, ...Littleton.
Casto, Charles Everett, ...Belleville.

Charnock, Ellwood C. .....Wellsburg.
Cole, Lora Sophia, ...Morgantown.
Daugherty, Norval Rogers, ...Morgantown.
Davis, John Comer, ...Huntington.
Davis, Benajah Thomas, Jr., ...Morgantown.
Flenniken, Fred Colburn, ...Carmichaels, Pa.
Gibson, James Davis, ...Huntington.
Graham, Klein Harrison, ...Piedmont.
Hodges, Warren Hampton, ...Morgantown.
Ingram, John Albert, ...Fenton, Mich.
Johnson, Anna Louise, ...Morgantown.
Keely, John Stacy, ...Charleston.
Lewis, Laura Frances, ...Aberdeen.
Livesay, Henry Gay, ...Frankford.
Lyons, Joseph William, ...Huntington.
Maldoon, Charles Robert, ...Potomac.
McQuilkin, Dwight Eggleston, ...Shepherdstown.
Miller, Dana Paul, ...Fairmont.
Morgan, Mont Earle, ...Fairmont.
Neel, Isa Maude, ...Ellenboro.
Parsons, Dickson Ward, ...Morgantown.
Robinson, Jedidiah Waldo, ...Grafton.
Seitter, William Frederick, ...Triadelphia.
Simms, Henry, ...Huntington.
Vannoy, Isabel Jane, ...Tanner.
Watson, Clyde Emil, ...Kingwood.
Wilson, Ella Virginia, ...Morgantown.
—31.

Special Students.

Bailey, Gertrude, ...Morgantown.
Beard, Lorenzo Alvin, ...Morgantown.
Bonar, William Porter, ...Glen Easton.
Bowers, John Hugh, ...Brushy Run.
Bowman, William Byrne, ...Rowlesburg.
Brown, Ellery Clark, ...Halleck.
Camp, David Jesse Holland, ...Morgantown.
Carman, Oliver Orlando, ...Turtle Creek, Pa.
Casto, Orpha Ruth, ...Peck's Run.
Chapman, William M., ...Eastbank.
Chesney, Harriet Beatrice, ...Fairmont.
Collett, Susie Wilson, ...Beverly.

Collett, Katharyn Ward, ...Beverly.
Cooke, Elizabeth Beatrice, ...Morgantown.
Coombs, John Ralph, ...Easton.
Connor, George O., ...Kirby, Pa.
Corbin, Emmet Addis, ...Ellenboro.
Cox, Hugh Workman, ...Morgantown.
Cox, Lawrence M., ...Morgantown.
Deahl, Mrs. J. N., ...Morgantown.
Downey, John Otho, ...Martinsburg.
Frazer, Leila Jessie, ...Morgantown.
Gibson, Ira C., ...Fairmont.
Goodwin, Elizabeth, ...Clarksburg.
Hall, Claude M., ...Freemansburg.
Halstead, Ada Mae, ...Kessler's Cross Lanes.
Hough, Clara, ...Morgantown.
Hundley, Marie Olive, ...Morgantown.
Hymes, Sallie Mattie, ...Meadowville
John, Daisy Belle, ...Morgantown.
Knox, Ulysses S., ...Zela.
Kortright, Flora Corwin, ...Morgantown.
LaCoste, Harold, ...Parkersburg.
Lazzell, Neta Blanche, ...Maidsville.
Lilly, Milton Judson, ...Dunns.
Marley, John Alton, ...Morgantown.
McCleary, Pansy, ...Wellsburg.
McCutcheon, Lura Belle, ...Kessler's Cross Lanes.
McDonough, Florence, ...Weston.
McGrew, Julia, ...Morgantown.
Mitchell, Lou Munsy, ...Romney.
Murphy, Edward Everett, ...Maidsville.
Nelson, Ina Forrest, ...Morgantown.
Peck, Wood Crim, ...Philippi.
Pollock, S. M., ...Morgantown.
Pratt, Arah Jane, ...Beechgrove.
Printz, Benjamin Graeff, ...Morgantown.
Provence, Lida Ethel, ...Greensboro, Pa.
Robe, Annie Leontie, ...Morgantown.
Sayre, Greek, ...Ripley.
Shanholtze, Minnie, ...Romney.
Shuttleworth, Mary Catherine, ...Little Falls.
Slonaker, A. C., ...Capon Bridge.

Smith, Jesse Blaine, ...Morgantown.
Smith, Bertha Jane, ...Sistersville.
Stansberry, Mollie, ...Clarksburg.
Stewart, James Vance, ...Morgantown.
Tait, Sara Cope, ...Morgantown.
Thompson, Anna Maria, ...New Geneva, Pa.
Turrell, Marion Charles, ...Morgantown.
Webb, Jesse Lee, ...Pullman, Washington.
Wolfe, F. Emma M., ...Dale, Pa.
—62.

The College of Engineering and Mechanic Arts.

Seniors.

Bayles, George Harmon, ...C. E. ..... Easton.
Burk, Fred Ross, ...C. E. ..... Pittsburg, Pa.
Hutchinson, Frank David, ...C. E. ..... Keyser.
Killingsworth, Richard Huffman, .C. E. ..... Truebada.
Lang, Thomas Simeon, ...C. E. ..... Bridgeport.
Richards, Edgar Ulysses, ...M. E. ..... New Cumberland.
Rogers, Ralph, ...M. E. ..... Morgantown.
Swallow, Walter Ambrose, ...C. E. ..... Pittsburg, Pa.
Tabler, Ernest Corban, ...C. E. ..... Martinsburg.
Thompson, Louis Clarence, ...M. E. ..... New York, N. Y.
—10.

Juniors.

Bailey, Bruce, ...C. E. ..... Grafton.
Christy, Cyrus Moats, ...C. E. ..... Delmont, Pa.
Cole, Emmert Luther, ...C. E. ..... Morgantown.
Gibson, William Herbert, ...C. E. ..... Morgantown.
Howe, James Vance, ...C. E. ..... Morgantown.
Lewis, John Clyde, ...C. E. ..... Grafton.
Maxwell, Earl Cook, ...C. E. ..... Wheeling.
Moore, Charles Larkin, ...C. E. ..... Brownsville, Pa.
Muldoon, Frank Walker, ...M. E. ..... Morgantown.
Nelson, Martin Emmett, ...C. E. ..... Halleck.
Robinson, Carel, ...C. E. ..... Charleston.
Zevely, Harry John, ...M. E. ..... Wheeling.
—12.

Sophomores.

Ballard, Walter Philip, ...M. E. ..... Fullen.
Boyers, Charles Forrest, ...M. E. ..... Randall.
Bullock, Edgar, ...M. E. ..... Pen Yan, N. Y.
Leonard, Frank Otis, ...C. E. ..... Buckhannon.

Lucas, Arthur Maple, ...C. E. ..... Morgantown.
Parsons, Delos Emmons, ...M. E. ..... Huntington.
Smith, Robley Tom, ...M. E. ..... Weston.
Snyder, Earl Bailie, ...C. E. ..... Uniontown, Pa.
Sperow, Brown Ferdinand, ...C. E. ..... Hedgesville.
—9.

Freshmen.

Abersold, Samuel C., ...C. E. ..... New Martinsville.
Braden, Samuel Bernard, ...C. E. ..... Arneth, Pa.
Brannon, Earl Holt, ...C. E. ..... Glenville.
Forquer, James Clark McGrew, ..C. E. ..... Brandonville.
Haymond, Thomas Wilson, Jr., ..C. E. ..... Bristol.
Hennen, Robert David, ...C. E. ..... Morgantown.
Hill, Francis McClellan, ...M. E. ..... Everson, Pa.
Hughes, Rector Romeo, ...C. E. ..... Spencer.
Jenkins, John Logan, ...M. E. ..... New Cumberland.
Kunkel, James Harvey, ...M. E. .....Morgantown.
Lantz, Clarence Ivan, ...C. E. ..... Fordyce, Pa.
Larew, James Edgar, ...C. E. ..... Red Sulphur Springs.
Lemley, Gilbert Southey, ...C. E. ..... Mt. Morris, Pa.
McDonald, Marshall Woodrow, ..C. E. ..... Charles Town.
Moore, Everett Blaine, ...C. E. ..... Steel.
Murphy, James Scott, ...M. E. ..... Morgantown.
Pabody, Earl Augustus, ...C. E. ..... Huntington.
Patterson, James Clarence, ...C. E. ..... Carmichaels, Pa.
Schrader, Henry Maxwell, ...C. E. ..... Lubeck.
Seamon, Harry Wheeler, ...C. E. ..... Moundsville.
Stewart, Jones Abraham, ...M. E. ..... New York, N. Y.
Thompson, David, ...C. E. ..... Parkersburg.
Thurmond, Walter Rippetoe, ...C. E. ..... Thurmond.
Wells, Charles E., Jr., ...C. E. ..... Wheeling.
Willis, Floyd Templeton, ...C. E. ..... Bridgeport.
Wood, Frederic Gordon, ...C. E. ..... Dego.
—26.

Special Students.

Brown, Roscoe C., ...C. E. ..... Clarksburg.
Burns, David Fay, ...C. E. .....Morgantown.
Calvert, Jasper Newton, ...M. E. ..... Kingwood.
Carder, James Albert, ...C. E. ..... Long Run.
Cole, Amor Bruce, ...C. E. ..... Simpson.
Cooke, Robert H., ...C. E. ..... Morgantown.
Gayzakian, Elisha, ...C. E. .....Tarsus, Asia Minor.
Hammer, Samuel F., ...C. E. ..... Connor, Pa.
Henritze, Benson Price, ...M. E. ..... Welch.

Hoard, James Luther, ...M. E..... Hoard.
Hutton, Ernest, ...M. E.....Huttonsville.
Jones, Henry Francis, ...C. E..... Core.
Judy, Lafayette, ...C. E..... Upper Tract.
Kennedy, Enoch W. Scott, ...C. E..... Philippi.
Kennedy, James Albert, ...M. E..... Uniontown, Pa.
Kiger, Reuben Alvin, ...C. E..... Sherrard.
Laing, William, ...C. E.....Fire Creek.
Milligan, William George, ...C. E..... Wheeling.
Parsons, James Brown, ...C. E..... Davis.
Ross, Warren Gans, ...C. E..... Dunkard, Pa.
Schneider, Eugene Henry, ...C. E..... Saulsbury.
Somerville, John Ferguson, ...C. E..... Farmington.
—22.

Preparatory Engineering Students.

Fourth Year Students.

Barrickman, Ross, ...Behler.
Brown, William Thomas, Jr., ...Grafton.
Crago, Ray Cornelius, ...Dearth, Pa.
Downs, W. S., ...Martinsburg.
Friedman, Harry, ...Grafton.
Hess, Henry H., ...Martinsburg.
Hopkins, Edwin Butcher, ...Morgantown.
Hopkins, Ray Samuel, ...Morgantown.
Laing, James Kay, ...Sun.
Lodge, John Dunkin, ...Bridgeport.
Miller, Wayne McCormick, ...Dilliner, Pa.
Reiley, Earl Walton, ...Hinton.
Rogers, D. Raymond, ...Jimtown.
Romine, Aubrey Laten, ...Morgantown.
Taylor, E. R., ...Morgantown.
Wiant, Harold Dana, ...Parkersburg.
Wilson, James Elmer, ...Mannington.
—17.

Third Year Students.

Bennett, Clyde Mortimer,, ...Morgantown.
Brown, Ray Clifford, ...New Cumberland.
Byers, Karl D., ...Grafton.
Cole, Odos Oscar, ...Morgantown.
Dayton, Arthur Spencer, ...Philippi.
Dudley, Edward Luther, ...Grafton.
Ellison, Charles Alex., ...Greenville.

Fleming, George Max, ...Fairmont.
Foreman, Alex. Hardie, ...Grafton.
Hall, Arthur, ...Grafton.
Holt, Howard Harwood, ...Grafton.
Mason, John W., Jr., ...Fairmont.
Millan, Russell Golden, ...Mannington.
Patton, Chester Carlisle, ...Moundsville.
Ruble, William Jefferson, ...Ruble, Pa.
Taylor, Shelby Ethelbert, ...Morgantown.
—16.

Second Year Students.

Colcord, Edward Clark, Jr., ...St. Albans.
Colcord, Francis Carleton, ...St. Albans.
Cooke, John Gordon, ...Hinton.
Crane, Stanhope Ordway, ...Kingwood.
Dawson, Archibald F., ...Morgantown.
Field, John William, ...Charleston.
Gibson, Clay Ashbel, ...Morgantown.
Hartley, German Smith, ...Liverpool.
Kirkpatrick, Chester Davey, ...Macdonald.
Reese, John, ...Elmo.
Rothermel, Alva Newcomer, ...McClellandstown, Pa.
Stewart, Stanley Matthew, ...Philippi.
Trapnell, John Mackey, ...Charles Town.
Vossler, Frank Alfred, ...Maysville.
—14.

First Year Students.

Bridge, Samuel House, ...Claremont.
Davisson, Thomas, ...St. Albans.
Dils, Alphonso, ...Quinnimont.
Higginbotham, W. E., ...Bacon.
Johnson, Warren Wellington, ...Meadowville.
Lang, Jesse David, ...Meadowville.
Martin, Carroll Foreman, ...Morgantown.
Phelps, Fred. A., ...Stone Cliff.
Sanders, Lawrence Davis, ...Maidsville.
Stewart, James Vance, ...Morgantown.
Watson, Robert Lawrence, ...Morgantown.
White, Tom J., ...Sharon, Pa.
Williams, Edward, ... Coaldale.
—13.

The College of Agriculture.

Graduate Students.

Atkeson, Thomas Zephniah, ...Buffalo.
B.Agr., West Virginia University, 1899;
B.S.Agr., ibid, 1900.

—1.

Seniors.

Atkeson, Karl Clark, ...Buffalo.
Click, Andrew Leopold, ...Cottageville.

—2.

Juniors.

Babb, Chester Haven, ...Medley.
Ellison, Addison Dunlap, ...Greenville.
Williams, Howard E., ...Duo.

—3.

Freshmen.

Dotson, J. C., ...Lewisburg.
Freed, Arthur Preston, ...New Haven, Pa.
Huyett, John Burns, ...Charles Town.
Vossler, Clarence Edward, ...Maysville.
Zinn, William D., ...Philippi.

—5.

Special Students.

Atkeson, Mary Meek, ...Buffalo.
Barthlow, Henry B., ...Fairmont.
Hopkins, Charles Lloyd, ...Lloydsville.
John, Gilbert Madison, ...Morgantown.

—4.

Other Students Taking Work in Agriculture.

Bloom, Arthur Randolph, ...Pt. Pleasant.
Bonar, William Peter, ...Glen Easton.
Bower, Edwin M., ...Morgantown.
Bowers, J. Hugh, ...Brushy Run.
Brittingham, P. S., ...Wheeling.
Cox, Boaz Baxter, ...Morgantown.
Davis, B. T., ...Huntington.
Davis, J. C., ...Huntington.
Fairfax, Ralph Bernard, ...Reedsville.

Judy, Lafayette, ...Upper Tract.
Keener, J. G., ...Pt. Marion, Pa.
Lyons, J. W., ...Huntington.
McMillen, R. H., ...Masontown.
McMillen, Parry Wade, ...Masontown.
Middleburg, Charles, ...Charleston.
Miller, M. O., ...Gladesville.
Pollock, S. N., ...Morgantown.
Robinson, J. S., ...Smithfield.
Snyder, L. C., ...Laurel Point.
Washer, William, ...Sistersville.
Willis, A. B., ...Bridgeport.
Wolfe, F. E. M., ...Morgantown.

——22.

The College of Law.

Graduate Students.

McWhorter, Charles Nathan, ...Lewisburg.
LL.B., West Virginia University, 1901.

—1.

Seniors.

Allen, Horace Darwin, ...D. ..... Berkeley Springs.
Archer, Lewis D., ...D. ..... Georgia.
Barnhart, William Gray, ...D. ..... Red House Shoals.
Bland, Robert, ...D. ..... Blandville.
Boyd, Theophilus Sutton, ...LL.B. .....Scottdale, Pa.
Brackman, Mason Clarke, ...D. ..... Ronceverte.
Brant, William Hyacinth, ...D. ..... Spraggs, Pa.
Burchinal, Ira Grant, ...D. ..... Smithfield, Pa.
Casto, Dorr Clayton, ...LL.B. ..... Parkersburg.
Conway, Wickliffe Melbourne, ..LL.B. ..... Bristol.
Ph.B., Albion College, 1897.
Cook, F. C., ...D. ..... Norwood.
Enslow, Frank, ...D. ..... Huntington.
Friedburg, Joseph, ...D. ..... Uniontown, Pa.
Gorman, Michael Eugene, ...LL.B. .....Morgantown.
A.B., West Virginia University, 1895.
Held, Charles W., ...D. ..... Towson, Md.
Iams, Frank Victor, ...D. ..... Waynesburg, Pa.
John, William Scott, ...LL.B. ..... Rosedale, Pa.
A.B., West Virginia University, 1900.
Kenna, Edward Benninghaus, ..LL.B. ..... Charleston.
A.B., St. Mary's College, 1897.

Lardin, Frank Miller, ...LL.B..... Masontown, Pa.
A.B., West Virginia University, 1901.

Lewis, Ernest Daniel, ...LL.B..... Johnstown.
A.B., West Virginia University, 1901.

Lively, Henry Shaw, ...LL.B..... Weston.

Loeb, Leo, ...LL.B.....Charleston.

McIntire, Thayer Melvin, ...D..... New Martinsville.

Miller, Alex. McVeigh, ...LL.B..... Alderson.

Moreland, James Rogers, ...LL.B..... Morgantown.
A.B., West Virginia University, 1901.

Morris, Tusca, ...LL.B..... Metz.

Neely, Matthew Mansfield, ...LL.B.....Smithton.
A.B., West Virginia University, 1901.

Sayre, Harold R., ...D..... New Martinsville.

Snodgrass, John Glen, ...D.....New Martinsville.

Theodoroff, Meroslas Geo. Pope,.LL.B..... Sofia, Bulgaria.

Trotter, James Russell, ...LL.B..... Buckhannon.
A.B., West Virginia University, 1891.
A.B., Harvard University, 1895.
A.M., ibid, 1896.

Warman, Altha, ...LL.B..... Morgantown.
A.B., West Virginia University, 1896.

Willey, Chauncey DeWitt, ...LL.B..... Morgantown.
A.B., West Virginia University, 1901.

Yost, Ervin H., ...D..... New Martinsville.

—34.

Juniors.

Arthur, Theodore Joseph, ...D..... Reedsville.

Auvil, Jesse Herbert, ...D..... Iaeger.

Border, Ralph Winebrener, ...D..... Kearneysville.

Carter, Charles Clay, ...D..... Smock, Pa.

Caton, Julian Earl, ...D..... Huntington.

Cuppett, David Earl, ...D.....Glade Farms.

Duggan, William Aloysius, ...D..... Benwood.

Embleton, Tennyson LeMoyne, ...D..... Charleston.

Frum, Orestes Ward, ...D..... Morganville.

Gatewood, Massie Cameron, ...D..... Linwood.

Greene, Charles F., ...D..... Confluence.

Hiteshew, Harry Otis, ...D..... Parkersburg.

Howard, George Witten, ...D..... Iaeger.

Lentz, Harry Edward, ...D..... New Martinsville.

Pendleton, John Randolph, ...D..... Hardy.

Poe, Clarence, ...LL.B..... Grafton.
A.B., West Virginia University, 1900.

Rosenbloom, Benjamin Louis, ...D..... Braddock, Pa.
Snyder, Alvan, ...LL.B..... Charleston.
Stone, James Frederick, ...D..... Point Pleasant.
Withers, Horace Holt, ...D..... Buckhannon.
Young, Guy Beall, ...D..... Glenville.
Zinn, Lyda Duane, ...D..... Troy.
—22.

Sophomores.

Armstrong, William Lee, ...Sutton.
Coffman, Charles G., ...Clarksburg.
Herd, Charles Thomas, ...Morgantown.
—3.

Freshmen.

Brady, James Benjamin, ...Berkeley Springs.
Carney, Samuel Clyde, ...Littleton.
Cummins, John William, ...Wheeling.
Curtis, Eugene Holmes, Jr., ...Wellsburg.
Deignan, Charles R., ...Wheeling.
Dunbar, Jesse Tuckwiller, ...Frankford.
Dyer, Charles Theodore, ...Handley.
Koonce, Darrell Kenneth, ...Halltown.
O'Brien, Francis A., ...Wheeling.
Schwenck, Lawrence Samuel, ...St. Mary's, Ohio.
—10.

Special Students.

Bingamon, Howard Milton, ...New Martinsville.
Boryer, Robert Johnson, ...Fairmont.
Bowen, Samuel Edwin, ...Charleston.
Bryant, Stanard Warren, ...Summersville.
Clark, Harry B., ...Fairmont.
Clark, George Washington, ...Needmore.
Colborn, Robert Pattison, ...Alverton, Pa.
Cotton, Harry Abraham, ...Uniontown, Pa.
Cowgill, Ira Voorhees, ...Cold Stream.
Copeland, Elliott Mastin, ...Morgantown.
Coulter, Samuel Nixon, ...Wheeling.
Dalinsky, Moses Jacob, ...Clarksburg.
Dunbar, Frank Coleman, ...Lewisburg.
Eddy, Levi Thomas, ...Brave, Pa.
Ferrell, George Fred.....Logan.

Glasscock, William E., ... Morgantown.
Hamilton, H. Curt, ... Fairmont.
Henritze, Thomas Floyd, ... Fairmont.
Hundley, Edward Everett, ... Morgantown.
King, Stuart Robinson, ... Mt. Nebo.
Marcum, Patrick Henry, ... Huntington.
Marsh, H., ... Cornwallis.
Marsh, Church, ... Pullman.
McClung, Dennis, ... Rupert.
McElfresh, Clarence N., ... Fairmont.
McFarland, Arthur L., ... Wheeling.
Meadows, William Deemmer, ... Peterstown.
Meek, Emory C., ... Morgantown.
Mullins, H. W., ... Danville.
Osborne, William T., ... Belington.
Powell, Michael, ... Blacksville.
Ritz, Austin Louis, ... Wheeling.
Shannon, T. H., ... Oceana.
Shriver, Caleb Strosnider, ... Cannonsburg, Pa.
Shriver, John, ... Daybrook.
Smith, James Albert C., ... Grantsville.
Smith, Lua Oscar, ... Plum.
Sperry, Clarence Burdette, ... Clarksburg.
Staats, Edgar R., ... Evans.
See, Roy, ... Frenchton.
Strother, Botts ..... Washington, Virginia.
Thomas, Wilbur Hedges, ... Tomahawk.
Tillman, Orien Kent, ... Horner.
Vandale, Earl, ... Spencer.
Wells, Ross, ... Sugar Valley.
Wilcox, Elba Julius, ... Wayne.
Wilson, Lawrence L., ... Milton.

—47.

The School of Music.

Piano.

Abraham, Mary, ... Smithfield, Pa.
Atkeson, Leda Cordelia, ... Buffalo.
Barnes, Blanche Eleanor, ... Fairmont.
Barrackman, Martha, ... Laurel Point.
Bennett, Sara Ann, ... Morgantown.

Burns, Mary Hogues, ...Morgantown.
Campbell, Katharyn, ...Smithfield, Pa.
Chadwick, Mary, ...Morgantown.
Clayton, Elizabeth, ...Newburg.
Cooke, Elizabeth, ...Morgantown,
Core, Myrtle, ...Core.
Courtney, Crystal, ...Morgantown.
Crumrine, Rhoda, ...Morgantown.
Dent, Nellie Gertrude, ...Morgantown.
Furman, Cecyl Mayme, ...Cassville.
Gapen, Pearl Daisy, ...Dilliner, Pa.
Gregg, Bessie Lee, ...Morgantown.
Hackney, Blanche, ...Morgantown.
Hayes, Jeannette Clements, ...Keyser.
Herd, Virginia, ...Morgantown.
Hite, Evelyn Pratt, ...Morgantown.
Hodges, Eliza Pearl, ...Morgantown.
Howe, Rosalie Boughner, ...Morgantown.
Johnson, Belle Wade, ...Morgantown.
Keener, Beulah Blanche, ...Morgantown.
Koontz, Leah Gertrude, ...Kessler's Cross Lanes.
Layton, Lulu Eugenie, ...Morgantown.
McGrew, Julia, ...Morgantown.
McNeil, Roland Carl, ...Morgantown.
Noble, Maude Elinor, ...Wheeling.
Ohern, Eugenie Grinnell, ...Morgantown.
Phillips, Amanda E., ...Smock, Pa.
Poling, Marie Ward, ...Fairmont.
Pomroy, Gertrude May, ...Morgantown.
Price, Georgia E., ...Morgantown.
Price, Edith Pearl, ...Morgantown.
Protzman, Blanche, ...Morgantown.
Ruble, Anna, ...Fairchance, Pa.
Sadler, Zella, ...Pt. Marion, Pa.
Sanders, Maud, ...Maidsville.
Shaffer, Carlton Marma, ...Morgantown.
Shallcross, Mary Allison, ...Morgantown.
Snider, Grace Edith, ...Pt. Marion, Pa.
Sprung, Edna W., ...Bula.
Waugh, Frances B., ...Wellsburg.
Weaver, Lulu, ...Morgantown.

White, Stella Sexton, ...Morgantown.
Wise, Medora Virginia, ...Rio.
Woodward, Katherine, ...Morgantown.
—49.

Voice.

Conaway, Minnie Lillian, ...Morgantown.
Crow, Lillian, ...Morgantown.
Crumrine, Rhoda, ...Morgantown.
Harshaw, Albert E., ...Morgantown.
Johnson, Belle Wade, ...Morgantown.
Moorhead, Jessie, ...Morgantown.
Ohern, Daniel Webster, ...Morgantown.
Reynolds, Mabel, ...Morgantown.
Rogers, Mrs. A. A., ...Morgantown.
Ruble, Anna, ...Fairchance, Pa.
Sadler, Bessie, ...Pt. Marion, Pa.
Stephens, Clara, ...Mt. Morris, Pa.
Stoetzer, Madge, ...Fairmont.
Utt, Oranna Ellen, ...Morgantown.
Warren, Eugene, ...Morgantown.
—15.

Pipe Organ.

Easter, Mary, ...Union.
Gregg, Bessie Lee, ...Morgantown.
—2.

Violin.

Crumrine, Martha, ...Morgantown.
Mansbach, Marie, ...Cumberland, Md.
Parker, Goldie, ...Morgantown.
Phillips ,C .A., ...Loudensville.
Raspillaire, Emile A., ...Morgantown.
Schmidt, Frederic, ... Morgantown.
—6.

Mandolin.

Hartigan, Elizabeth, ...Morgantown.
Ross, John, ...Morgantown.
—2.

Horn.

Harshaw, Albert E., ...Morgantown.
—1.

Harmony.

Abraham, Mary, ...Smithfield, Pa.
Barnes, Blanche, ...Fairmont.
Burns, Mary, ...Morgantown.
Hackney, Blanche, ...Morgantown.
Hite, Evelyn Pratt. .....Morgantown.
Keener, Beulah, ...Morgantown.
Pomroy, Gertrude May, ...Morgantown.
Protzman, Blanche, ...Morgantown.
Sadler, Zella, ...Pt. Marion, Pa.
Sanders, Maude, ...Maidsville.
Waugh, Frances Belle ,.....Wellsburg.
—11.

Ensemble.

Waugh, Frances, ...Wellsburg.
—1.

Ear Training.

Barnes. Blanche, ...Fairmont.
Bennett, Sara Ann, ...Morgantown.
Ruble, Anna, ...Fairchance, Pa.
Sadler, Zella, ...Pt. Marion, Pa.
Sadler, Bessie, ...Pt. Marion, Pa.
—5.

OTHER STUDENTS TAKING WORK IN MUSIC.

Areford, Edna B., ...Paiskey, Pa.
Atkeson, Mary Meek, ...Buffalo.
Bell. Winnie, ...Bula.
Browning, Bertha Cleland, ...Wellsburg.
Burns, Evelyn, ...Morgantown.
Burt, Fred A., ...Mannington.
Chesney, Harriet, ...Fairmont.
Collett, Sue Wilson, ...Beverly.
Collett, Katharyn Ward, ...Beverly.
Connor, G. O., ...Kirby, Pa.
Crane, Stanhope W., ...Kingwood.
Davis, Bessie Belle, ...Morgantown.
Deahl, Mrs. J. N., ...Morgantown.
Dille, Maude, ...Morgantown.
Goodwin, Elizabeth, ...Clarksburg.
Green, Ethel, ...Morgantown.

Hall, Eva, ...Dunkard, Pa.
Hall, Emily, ...Keyser.
Hayes, Camille, ...Morgantown.
Hill, T. Getz., ...Morgantown.
Hollobough, Paul Jason, ...Mannington.
Johnson, Anna, ...Morgantown.
Langfitt, Ada, ...Parkersburg.
Leech, Fannie May, ...Morgantown.
McCleary, Pansy, ...Wellsburg.
McNeil, C. S., ...Morgantown.
Miller, Peri Inez, ...Dilliner, Pa.
Ownby, Monroe,.....Morgantown.
Reilly, Earl Walton, ...Hinton.
Russell, Grace Lilian,.....Skowhegan, Me.
Shanholtz, Minnie, ...Romney.
Smith, Bertha Jane, ...Sistersville.
Smith, Samuel A., ...Morgantown.
Sutherland, John William, ...St. Albans.
Sperow, B. F., ...Hedgesville.
Tait, Sara Cope, ...Morgantown.
Ward, Emma, ...Lee Bell.
Watson, Lulu, ...Bridgeport.
—38.

Mandolin and Guitar Club.

(Guitar.)

Cox, Lawrence M., ...Morgantown.
Burk, Fred Ross, ...Pittsburg, Pa.
Rhoades, George C., ...Morgantown.

(Mandolin.)

Flenniken, Frederick, ...Carmichaels, Pa.
Hartigan, Elizabeth, ...Morgantown.
Hill, T. Getz., ...Frostburg, Md.
Spence, Ross, (Leader), ...Morgantown.
Snyder, Earle Bailie, ...Uniontown, Pa.
—8.

Glee Club.

Bennett, C. M., ...Morgantown.
Burk, Fred Ross, ...Pittsburg, Pa.
Campbell, Harold, ...Wheeling.

Cole, E. L., ...Morgantown.
Flenniken, Fred,.....Carmichaels, Pa.
Graham, Klein Harrison, ...Piedmont.
Hill, T. Getz., ...Frostburg, Md.
Marley, T. J.,.....Morgantown.
Milligan, William G., ...Wheeling.
Muldoon, Walker, ...Morgantown.
Ohern, D. W., ...Morgantown.
Rhoades, G. C., ...Morgantown.
Smith, Robly Tom, ...Weston.
Smith, S. A., ...Morgantown.
Spence, Ross. .....Morgantown.
Sperow, B. F., ...Hedgesville.
Swallow, W. A., ...Pittsburg, Pa.
Watson, Clyde, ...Kingwood.
—18.

Orchestra Members.

Mr. Ross Spence, Conductor, ...Morgantown.
Miss Julia McGrew, Pianist, ...Morgantown.
Bayles, W. H., ...Morgantown.
Cox, Lawrence M., ...Morgantown.
Crane. Stanhope O., ...Kingwood.
Crumrine, Rhoda, ...Morgantown.
Fleming, George, ...Fairmont.
Freed, A. P., ...New Haven, Pa.
Hoffman, John, ...Morgantown.
Hill, T. Getz., ...Frostburg, Md.
Martin, Carroll, ...Morgantown.
Mestrezat, W. A., ...Morgantown.
Muldoon, Walker, ...Morgantown.
Muldoon, Harry, ...Morgantown.
Raspillaire, Emile, ...Morgantown.
Schraeder, Henry M., ...Lubeck.
Schmidt, Frederick, ...Lubeck.
Smith, S. A., ...Morgantown.
Smith, J. B., ...Morgantown.
—19.

St. Cecelia Society.

Barnes, Blanche, ...Fairmont.
Bennett, Sallie, ...Morgantown.

Browning, Bertha, ...Wellsburg.
Burns, Evalyn, ...Morgantown.
Collett, Sue Wilson, ...Beverly.
Conaway, Minnie, ...Morgantown.
Crow, Lillian, ...Morris X Roads, Pa.
Deahl, Mrs. J. N., ...Morgantown.
Dille, Maude, ...Morgantown.
Gregg, Mary, ...Morgantown.
Gregg, Bessie, ...Morgantown.
Hayes, Gertie, ...Morgantown.
Jamison, Gillian, ...Morgantown.
Johnson, Belle, ...Morgantown.
Johnson, Anna, ...Morgantown.
Martin, Nella, ...Parkersburg.
McCleary, Pansy, ...Wellsburg.
Miller, Frances, ...Monongah.
Purinton, May, ...Morgantown.
Rogers, Mrs. A. A., ...Morgantown.
Ruble, Anna, ...Fairchance, Pa.
Sadler, Bessie, ...Pt. Marion, Pa.
Smith, Bertha Jane, ...Sistersville.
Stevens, Clara .....Pt. Marion, Pa.
Tait, Sara, ...Morgantown.
Watson, Lulu, ...Bridgeport.
Woodward, Katherine, ...Morgantown.
—27.

The Department of Drawing and Painting.

Coda, Mary, ...Charlotte.
Everett, George, ...Morgantown.
Grant, Hannah Elizabeth, ...Morgantown.
Ireland, Addie, ...Morgantown.
—4.

OTHER STUDENTS TAKING WORK IN DRAWING AND PAINTING.

Alderson, Fleming N., ...Summersville.
Armstrong, Mary L., ...Morgantown.
Bailey, Gertrude, ...Morgantown.
Baker, John U., ...Morgantown.
Bayles, George Harmon, ...Easton.
Bell, Winnie, ...Bula.

Bennett, Lawrence Edward, ...Ireland.
Berg, Sylvester Martin, ...Pt. Marion, Pa.
Bridge, Samuel H., ...Claremont.
Brooke, Nannie Washington, ...Morgantown.
Brown, William T., Jr., ...Grafton.
Brown, Benjamin E., ...Davis.
Brown, Lucie Sara, ...New Cumberland.
Brown, Roscoe, ...Clarksburg.
Brown, Bennie E., ...Bowlby.
Burt, Fred A., ...Mannington.
Byers, Karl Davis, ...Grafton.
Campbell, George Howard, ...Kasson.
Carskadon, George Abbott, ...Keyser.
Casto, Charles Everett, ...Belleville.
Chadwick, George Sturgiss,.....Morgantown.
Chollett, Charles, Jr., ...Morgantown.
Colcord, Francis Carlton, ...St. Albans.
Colcord, Edward Clark, Jr., ...St. Albans.
Connelly, Benjamin Franklin, ...Littleton.
Cooke, John Gordon, ...Hinton.
Cooke, Robert Adams, ...Morgantown.
Cowden, Owen McKnight,.....Cameron.
Cox, Hugh Workman, ...Morgantown.
Core, Myrtie Otelia, ...Core.
Core, John Lee, ...Morgantown.
Crago, Ray Cornelius, ...Adah, Pa.
Craig, Georgia Phillips, ...Shippensburg, Pa.
Crane, Stanhope Ordway, ...Kingwood.
Crow, Charles Sumner, ...Morris X Roads, Pa.
Davis, Madge, ...Morgantown.
Davis, Bruce, ...Maidsville.
Davison, Thomas, ...St. Albans.
Dille, Maude, ...Morgantown.
Dils, Alfonso, ...Quinnimont.
Donley, Luther Morris, ...Bowlby.
Downs, William Smith, ...Martinsburg.
Dudley, Edward Luther, ...Grafton.
Faris, George Thomas, ...Bridgeport.
Flenniken, Fred Colburn, ...Carmichaels, Pa.
Flowers, Frank Earnest, ...Glover's Gap.
Foreman, Alex. Hardie, ...Grafton.

Fravel, Mary Stewart, ... Poca.
Friedman, Harry, ... Grafton.
Garrison, David Campbell, ... Morgantown.
Gatewood, Massie Cameron, ... Linwood.
Gayzakian, Elisha, ... Tarsus, Asia Minor.
Gibson, John Gail, ... Morgantown.
Goodwin, Elizabeth, ... Clarksburg.
Gould, Earl Dinsmore, ... Parkersburg.
Hall, Eva Blanche, ... Dunkard, Pa.
Halstead, Ada Mae, ... Kessler's Cross Lanes.
Hayes, Camille K., ... Morgantown.
Haymond, Thomas Wilson, Jr., ... Bristol.
Henderson, James Stanley, ... McKeesport, Pa.
Hervey, George Edward, Jr., ... Morgantown.
Herod, Francis Clyde, ... Dunkard, Pa.
Hess, Henry Hunter, ... Martinsburg.
Hill, Francis McClelland, ... Everson, Pa.
Hollobough, Paul Jason, ... Mannington.
Holt, Howard Harwood, ... Grafton.
Hoover, George Porter, ... McClellandstown, Pa.
Hopkins, Georgia Louise, ... Morgantown.
Hopkins, Roy Samuel, ... Morgantown.
Hopkins, Edwin Butcher, ... Morgantown.
Horner, Annie, ... Clarksburg.
Hymes, Sarah Mattie, ... Meadowville.
John, Daisy Belle, ... Morgantown.
Johnston, Maude Syphers, ... Pentress.
Jones, Bettie Cook, ... Morgantown.
Jones, Ethel Belle, ... Knottsville.
Johnson, Warren Wellington, ... Meadowville.
Kamerer, Rose, ... Morgantown.
Kauffeld, H., ... Mt. Oliver, Pa.
Keely, John Stacy, ... Charleston.
Kirkpatrick, Chester Dana, ... Macdonald.
Klein, Aaron, ... Grafton.
Koontz, Leah Gertrude, ... Kessler's Cross Lanes.
Lantz, James Morris, ... Morgantown.
Lawson, Herschel Wayne, ... Clarksburg.
Laing, James Kay, ... Sun.
Laing, William, ... Fire Creek.
Lazzelle, Neta Blanche, ... Maidsville.

Lodge, John Dunkin, ...Bridgeport.
Lough, Maude, ...Morgantown.
Marcum, Patrick Henry, ...Huntington.
Martin, Carroll F., ...Morgantown.
Martin, Paul Heermans, ...Morgantown.
Martin, Martha Ray, ...Morgantown.
Mason, John W., Jr., ...Fairmont.
McCleary, Pansy, ...Wellsburg.
McCormick, Eugene D., ...Morgantown.
McDonald, Marshall Woodrow, ...Charles Town.
Miller, Peri Inez, ...Dilliner, Pa.
Miller, Dana Paul, ...Fairmont.
Miller, Warren Daniel, ...Dilliner, Pa.
Miller, Irene, ...Alderson.
Miller, Wayne McCormick, ...Dilliner, Pa.
Morris, Nellie Delia, ...Morgantown.
Ownby, F. H., ...Morgantown.
Parsons, Frances Anne, ...Morgantown.
Parsons, James Brown, ...Davis.
Parsons, Dickson Ward, ...Morgantown.
Patton, Chester C., ...Moundsville.
Phelps, Fred A., ...Stone Cliff.
Phillips, Clarence A., ...Loudensville.
Price, George Washington, ...Uffington.
Price, Brown, ...Morgantown.
Reese, John, ...Elmo.
Reiley, Earle Walton, ...Hinton.
Richards, Edgar Ulysses, ...New Cumberland.
Richardson, Joseph Howard, ...Elizabeth.
Riffe, Jerome Alfred, ...Hinton.
Rightmire, Edna Virginia, ...Morgantown.
Robinson, Carel, ...Charleston.
Rothermel, Alva Newcomer, ...McClellandstown, Pa.
Romine, Aubrey Laten, ...Morgantown.
Ruble, William J., ...Ruble, Pa.
Russell, Grace Lilian, ...Skowhegan, Me.
Sanders, Lawrence Davis, ...Maidsville.
Schaeffer, Bertha B., ...Morgantown.
Scherr, Vernon Blair, ...Charleston.
Sennett, Maude Savilla, ...Morgantown.
Shinn, Fred Lawrence, ...Shinnston.

Stewart, Stanley Matthew, ...Philippi.
Steele, Samuel Charles, ...Morgantown.
Swindler, G. R., ...Jaco.
Tapp, Elizabeth Louise, ...Morgantown.
Trapnell, John Mackey, ...Charles Town.
Treat, Mark Emitt, ...Morgantown.
Turner, W. M., ...Morgantown.
Voigt, Harold A., ...Uneva.
Vossler, Francis Alfred, ...Maysville.
Warman, Winnie, ...Morgantown.
Warman, Russell H., ...Morgantown.
Watson, Robert Lawrence, ...Morgantown.
Williams, Edward, ...Coaldale.
Wlilis, Arthur B., ...Bridgeport.
Wise, Medora Virginia, ...Rio.
Whitham, Rachel Elizabeth, ...Morgantown.
Wilson, Ella Virginia, ...Morgantown.
Wood, Frederick Gordon, ...Dego.
Wright, John Franklin, ...Parkersburg.
Yoke, Grace Eliza, ...Morgantown.
—149.

The Preparatory School.

Fourth Year Students.

Allison, Arthur Garfield ,.....Chester.
Baumgardner, Frank Gilbert Haven, ...Morgantown.
Brand, Franklin Marion, ...Cassville.
Buchanan, Margaret, ...Morgantown.
Clark, John William, ...Morgantown.
Crow, Charles Sumner, ...Morris X Roads, Pa.
Davis, Besse Belle, ...Morgantown.
Davis, Bruce, ...Maidsville.
Flowers, Frank Ernest, ...Glover's Gap.
Fravel, Mary Stewart, ...Poca.
Lough, Maude, ...Cassville.
Martin, Paul Heermans, ...Morgantown.
McCormick, Eugene De La Pointe, ...Morgantown.
McFarland, Robert Lee, ...Parkersburg.
Miller, Daniel Warren, ...Dilliner, Pa.
Morris, Nellie Delia, ...Morgantown.
Oliver, Alfred Cookman, Jr., ...Morgantown.

Ownby, Frederick Hager, ...Morgantown.
Ownby, Monroe, ...Morgantown.
Richards, Dell Roy, ...New Cumberland.
Riffe, Jerome Alfred, ...Hinton.
Rightmire, Edna, ...Morgantown.
Schaeffer, Bertha Blanche, ...Brick Church, Pa.
Smith, Samuel Augustus, ...Morgantown.
Stathers, Burk Smith, ...Clarksburg.
Taylor, Everett Ray, ...Morgantown.
Turner, Edgar Duncan, ...Morgantown.
Turner, Grace Baldwin, ...Morgantown.
Umbell, Isaac Waldo, ...Glade Farms.
Ward, Emma, ...Lee Bell.
Wilson, John Walker, ...Morgantown.
—31.

Third Year Students.

Alderson, Fleming Newman, ...Summersville.
Burns, Evelyn Sage, ...Morgantown.
Callison, James Henry, ...Leivasy.
Campbell, Harold William, ...Wheeling.
Campbell, George Howard, ...Kasson.
Campbell, John Edgar, ...Moundsville.
Davenport, Arthur Thistlewood, ...Charles Town.
Dille, Maud Evans, ...Morgantown.
Fairfax, Ralph Bernard, ...Reedsville.
Garrison, David Campbell, ...Morgantown.
Green, Ethel Averill, ...Morgantown.
Hayes, Camille Katherine, ...Morgantown.
Hewitt, Frank Ready, ...Bramwell.
Hoover, George Porter, ...McClellandstown, Pa.
Jackson, Stephen Goodloe, ...Jane Lew.
Keener, John Grove, ...Pt. Marion, Pa.
Lawson, Herschel Wayne, ...Clarksburg.
McMillen, Perry Wade, ...Masontown.
Nolte, Albert Earnest, ...Wheeling.
Pearcy, Charles Lewis, ...Morgantown.
Strickler, Robert Parvin, ...Philippi.
Wamsley, Harold Webster, ...Valley Bend.
West, John Thomas,.....Lowman.
Whaley, Baxter Monroe, ...Finch.
Whitham, Rachel Elizabeth, ...Morgantown.

Woodward, Mayre Ruffner, ...Morgantown.
Woodward, Henry Fry, ...Morgantown.
—27.

Second Year Students.

Barclay, Hugh, ...Carmichaels, Pa.
Core, Myrtle Otelia, ...Core.
Endsley, Gilbert Frey, ...Brandonville.
Ford, Sarah Margaret Llewellyn, ...Morgantown.
Fortney, Willis C., ...Independence.
Fortney, John Marion Rogers, ...Irondale.
Henderson, James Stanley, ...McKeesport, Pa.
Hopkins, Georgia Louise, ...Morgantown.
Hundt, Herman August, ...Wheeling.
Jones, Ethel Belle, ...Knottsville.
Jones, Walter Benington, ...Molehill.
Kauffeld, Herman Geo. Adolph, ...Mt. Oliver, Pa.
Koontz, James Andrew, ...Morgantown.
Lantz, James Morris, ...Fairmont.
Lough, Myrtle, ...Cassville.
McNeill, Chauncey St. Clair, ...Morgantown.
Miller, Charles Ellsworth, ...Oldframe, Pa.
Miller, Peri Inez, ...Dilliner, Pa.
Moser, William Calvert, ...Ruble, Pa.
Nestor, Ira Francis, ...Auvil.
Nickson, William Edmond, ...Carmichaels, Pa.
Pence, George Lewis, ...Pence Springs.
Pendleton, Daniel M., ...Spencer.
Steele, Samuel Charles, ...Morgantown.
Sutherland, John William, ...St. Albans.
Swisher, Scott Neil, ...Morgantown.
Turner, Mary Rebecca, ...Morgantown.
Vaughan, Robert Renwick, ...Lobelia.
Voigt, Harold Alexander, ...Uneva.
Warman, Russell McManimine .....Morgantown.
Warman, Winnie, ...Morgantown.
Wharton, Blanche, ...Morgantown.
Wiles, Luther Young, ...Morgantown.
—33.

First Year Students.

Alderson, Joseph, ...Summerville.
Areford, Edna Belle, ...Paisley, Pa.

Arnett, Thomas French, ...Osgood.
Arnold, Orley Dayton, ...Peel Tree.
Baker, John Ulysses, ...Beverly.
Bell, Winnie .....Bula.
Berg, Sylvester Martin, ...Pt. Marion, Pa.
Bower, Edwin Matthew, ...Morgantown.
Callaghan, Vincent DePaul, ...Connellsville, Pa.
Callaway, Quincy Elbert, ...Beckley.
Chadwick, George Sturgiss, ...Morgantown.
Chipps, Franklin Henry, ...Uffington.
Coda, John Grady, ...Charlotte.
Cole Delbert Elmer, ...Leroy.
Connelly, Benjamin Franklin, ...Littleton.
Conway, Earl, ...Morgantown.
Core, John Lee, ...Morgantown.
Cowden, Owen McKnight, ...Cameron.
Crow, Lillian, ...Morris X Roads, Pa.
Davis, Clara Olive, ...Out Crop, Pa.
Davis, Madge Belle, ...Morgantown.
Donley, Luther Morris, ...Bowlby.
Faris, George Thomas, Jr., ...Bridgeport.
Gibson, John Gail, ...Morgantown.
Gould, Earl Dinsmore, ...Parkersburg.
Hall, Clark Leslie, ...Charlotte.
Hall, Eva Blanche, ...Dunkard, Pa.
Hawkins, William Claude, ...Morgantown.
Herd, Virginia, ...Morgantown.
Hill, Ira Franklin, ...Morgantown.
Humes, Pearl Palmerton, ...West Newton, Pa.
Ireland, Bassil Watts, ...Morgantown.
Johnson, William Gordon, ...Jaco.
Johnston, Maude Syphers, ...Pentress.
Kalbaugh, Alex. Brown, ...Barnum.
Kamerer, Rose, ...Morgantown.
Kislig, Charles, ...New Martinsville.
Kunst, Charles F. William, ...Pruntytown.
Langfitt, Ada Herilda, ...Parkersburg.
Madera, Alice Cordelia, ...Morgantown.
McConnell, James Goorley, ...Steubenville.
Nolte, Henry August, ...Wheeling.
Parsons, Peter Franklin, ...Pioneer.

Peters, Allan, ...McKeesport, Pa.
Phillips, Maude, ...Morgantown.
Price, Brown, ...Morgantown.
Price, George Washington, ...Uffington.
Posten, Lester Jay, ...Morgantown.
Pratt, Oliver Clinton, ...Beech Grove.
Protzman, Dessie, ...Morgantown.
Rhodes, Horner Heavener, ...Lightburn.
Richardson, Joseph Howard, ...Elizabeth.
Rider, John Lee, ...High House, Pa.
Scherr, Vernon Blaine, ...Charleston.
Sesler, Russell, ...Newcomer, Pa.
Shafer, Ora Gay, ...Tyrone.
Shinn, Frederick Lawrence, ...Shinnston.
Simms, Charles Jordan, ...Cameron.
Smith, Walter Orville, ...Morgantown.
Stuart, Walter, ...Romine's Mills.
Stone, William Henry, ...Pt. Pleasant.
Stout, Alfonso, ...Quiet Dell.
Swindler, William Thomas, ...Jaco.
Treat, Mark Emitt, ...Morgantown.
Turner, James Jackson, ...Morgantown.
Turner, Uriel Mallory, ...Morgantown.
Warder, John Irwin, ...Weston.
Watts, Eva May, ...Morgantown.
Willis, Etta, ...Bridgeport.
Woodford, Stella, ...Morgantown.
Wright, John Franklin, ...Parkersburg.

—71.

The Commercial School.

Armstrong, Mary, ...Morgantown.
Armstrong, Jessie, ...Morgantown.
Burrill, Clara, ...Mannington.
Burt, F. A., ...Mannington.
Core, C. C., ...St. Mary's.
Darby, Ella ,.....Fairchance, Pa.
Eaton, E. C., ...Morgantown.
Fleming, D. H., ...Shinnston.
Given, Mrs. Anna .....Morgantown.
Hervey, George E., ...Morgantown.

Hoy, C. F., ...Charleston.
Klein, Aaron, ...Grafton.
Martin, Mrs. Mabel, ...Morgantown.
Martin, Martha, ...Morgantown.
Meek, E. C., ...Morgantown.
Middleberg, Charles, ...Parkersburg.
Miller, M. O., ...Gladesville.
Morrow, H. B., ...West Newton, Pa.
Newman, Emma, ...Morgantown.
Orr, C. N., ...Kingwood.
Parsons, Frances, ...Morgantown.
Phillips, Amanda, ...Smock, Pa.
Phillips, Clarence A., ...Loudensville.
Price, Kathryn, ...Morgantown.
Reynolds, B. W., ...Morgantown.
Richards, D. R., ...New Cumberland.
Robinson, J. S., ...Smithfield.
Smith, J. H., ...Morgantown.
Willis, Arthur B., ...Bridgeport.
Wright, Robert V., ...Uniontown, Pa.
Yoke, Grace, ...Morgantown.

—31.

Other Students taking work in this School:

Alderson, Joseph, ...Summersville.
Allen, H. D., ...Berkeley Springs.
Allison, A. G., ...Chester.
Auvil, J. H., ...Iaeger.
Babb, H. C., ...Medley.
Baker, J. U., ...Beverly.
Beall, C. H., ...Morgantown.
Bell, Winnie, ...Bula.
Bennett, C. W., ...Morgantown.
Bloom, A. R., ...Pt. Pleasant.
Bowman, F. L., ...Charleroi, Pa.
Brown, E. C., ...Halleck.
Byrne, Edward, ...Everson, Pa.
Campbell, H. M., ...Wheeling.
Carney, Samuel Clyde, ...Littleton.
Carskadon, George Abbott, ...Keyser.
Colcord, F. C., ...St. Albans.
Colcord, E. C., ...St. Albans.

Collett, Sue Wilson, ...Beverly.
Collett, Katharyn Ward, ...Beverly.
Copeland, E. M., ...Morgantown.
Core, J. L., ...Morgantown.
Cole, Lora, ...Morgantown.
Coluter, S. M., ...Clarksburg.
Cowen, Elsie, ...Morgantown.
Cowden, O. M., ...Hickory, Pa.
Davidson, C. G., ...St. Albans.
Davenport, A. F., ...Charles Town.
Ellison, C. H., ...Greenville.
Faris, G. T., ...Bridgeport.
Gould, E. D., ...Parkersburg.
Hawkins, W. C., ...Morgantown.
Hayes, Camille, ...Morgantown.
Hollobough, P. J., ...Morgantown.
Hughes, A. G., ...Ravenswood.
Hundley, Marie, ...Morgantown.
Jones, W. B., ...Mole Hill.
Jones, Ethel, ...Knottsville.
Kalbaugh, A. B., ...Barnum.
Keener, J. G., ...Pt. Marion, Pa.
Kincaid, Lida, ...Morgantown.
Kortright, Mrs. F. C., ...Morgantown.
Kunst, C. F. W., ...Pruntytown.
Lewis, E. D., ...Johnstown.
Lorentz, Percy, ...Berkeley Springs.
Lough, Maude, ...Morgantown.
Lough, Myrtie, ...Morgantown.
Madera, Alice, ...Morgantown.
Martin, Martha Ray, ...Morgantown.
McCauley, Ethelbert, ...Morgantown.
McNeill, L. B., ...Morgantown.
Miller, Lenora V., ...Webster Springs.
Muldoon, Harry, ...Morgantown.
Mullins, H. W. B., ...Danville.
Nolte, H. A., ...Wheeling.
Pearcy, C. L., ...Morgantown.
Phelps, F. A., ...Stone Cliff.
Phillips, Maude, ...Morgantown.
Pixler, J. V., ...Morgantown.

Price, Brown, ...Morgantown.
Protzman, Dessie, ...Morgantown.
Purinton, J. A., ...Morgantown.
Robe, Annie L., ...Morgantown.
Rogers, D. R., ...Jimtown.
Scherr, V. B., ...Charleston.
Sesler, Russell, ...Newcomer, Pa.
Smith, G. H., ...Halleck.
Smith, S. A., ...Morgantown.
Smith, W. O., ...Morgantown.
Somerville, J. F., ...Farmington.
Staats, E. R., ...Evans.
Stansberry, Mollie, ...Clarksburg.
Stewart, James V., ...Morgantown.
Stone, W. H., ...Pt. Pleasant.
Steele, S. C., ...Morgantown.
Sutherland, J. W., ...St. Albans.
Swindler, G. R., ...Jaco.
Swisher, S. N., ...Morgantown.
Tait, Sara, ...Morgantown.
Treat, Mark, ...Morgantown.
Voigt, Harold, ...Uneva.
Vossler, Frank H., ...Maysville.
Wallace, John B., ...Morgantown.
Washer, William, ...Sistersville.
Watson, Lulu, ...Bridgeport.
Watts, C. C., ...Charleston.
Watts, Eva, ...Morgantown.
Weaver, Frank A., ...Morgantown.
Wiles, L. Y., ...Morgantown.
Woodward, H. F., ...Morgantown.
Woodward, M. R., ...Morgantown.

—91.

The Preparatory School at Montgomery.

Allen, Beatrice Emma, ...Montgomery.
Amick, Bessie, ...Winona.
Beckenstein, Dora B., ...Montgomery.
Blake, Mabel E., ...Boomer.
Boling, Edna Mabel, ...Montgomery.
Bowling, Steitzner, ...Fayetteville.
Baber, Ola Ethel, ...Lansing.

Baber, Nellie Maude, ... Lansing.
Carlin, Daisy, ... Montgomery.
Champe, Hallie L., ... Montgomery.
Champe, Emory P., ... Montgomery.
Champe, Carl P., ... Montgomery.
Cole, William Davis, ... Montgomery.
Cole, Maggie Annie, ... Montgomery.
Copeland, Daisy, ... Cannelton.
Cummins, George, ... Eastbank.
Dalton, Florence, ... Handley.
Darnall, William Henry, ... Lansing.
Davin, H. A., ... Montgomery.
Davin, Lottie L., ... Montgomery.
Dean, Earnest G., ... Handley.
Devany, William, ... Cannelton.
Drennen, Fred F., ... Summersville.
Dupey, Frank Garland, ... Cannelton.
Dwyer, Richard C., ... Handley.
Evans, Nora G., ... Montgomery.
Farrell, Susie L., ... Mt. Carbon.
Foster, Clara L., ... Charleston.
Farley, Maggie ,..... Kanawha Falls.
Faulkner, Cecily, ... Mt. Carbon.
Gooch, John Merritt, ... Montgomery.
Grose, Eva F., ... Summersville.
Harland, Florence, ... Mt. Carbon.
High, Logan, ... Charleston.
Hudson, Clara Olive, ... Bissel.
Jenkins, William James, ... Mt. Carbon.
Johnson, Jackson L., ... Pratt.
Love, Matie, ... Montgomery.
Lowry, Ethel Anna, ... Mt. Carbon.
McChesney, Mortimer, ... Charleston.
Montgomery, Howard C., ... Montgomery.
Morris, Bettie Elizabeth, ... Montgomery.
O'Neill, Connor Cornelius, ... Parkersburg.
Orcutt, Aubrey, ... Charleston.
Parker, Charles E., ... Cotton Hill.
Porter, Laura, ... Montgomery.
Proctor, William, ... Cannelton.
Quesenberry, James E., ... Red Star.

Rader, William, ...Mound.
Renick, Bertha, ...Summersville.
Rhodes, George E., ...Lansing.
Russell, Alex., ...Hawk's Nest.
Russell, Anna Mae, ...Hawk's Nest.
Sevy, Claudia, ...Handley.
Settle, James Edward, ...Deep Water.
Shrewsberry, William D., ...Montgomery.
Shirkey, Sidney S., ...Malden.
Spencer, Oscar, ...Charleston.
Stafford, Alma Florence, ...Eagle.
Steele, Chauncey S., ...Cotton Hill.
Toney, Eliza P., ...Mt. Carbon.
Toney, William, ...Mt. Carbon.
Watkins, Nettie, ...Kanawha Falls.
Walker Harry, ...Winona.
Wharton, E. S., ...Montgomery.
Wilson, Anna L., ...Scarbro.
Wintz, Fred C., ...Montgomery.
Wiseman, Stella May, ...Cannelton.
Woodruff, Harry, ...Handley.
Wood, Herbert, ...Dego.
—70.

Summary of Students.

Graduate Students,		26
College of Arts and Sciences:		
Seniors,	29	
Juniors,	28	
Sophomores,	31	
Freshmen,	31	
Special Students,	62	
Total number of undergraduate students in College of Arts and Sciences,		181
College of Engineering and Mechanic Arts:		
Seniors,	10	
Juniors,	12	
Sophomores,	9	
Freshmen,	26	

Special Students,	22	
Total number of students in the College of Engineering and Mechanic Arts,		79
College of Agriculture:		
Graduate students,	1	
Seniors,	2	
Juniors,	3	
Freshmen,	5	
Special students,	26	
Total number of students in College of Agriculture,		37
College of Law:		
Graduate students,	1	
Seniors,	34	
Juniors,	22	
Sophomores,	3	
Freshmen,	10	
Special students,	47	
Total number of students in College of Law,		117
School of Music:		
Piano,	49	
Voice,	15	
Pipe Organ,	2	
Violin,	6	
Mandolin,	2	
Wind Instruments,	1	
Harmony,	11	
Ensemble,	1	
Ear Training,	5	
Total enrollment of regular students,	92	
Deduct for names counted more than once,	20	
Number of regular students,		72
Special Students	110	
Deduct names counted more than once,	41	
Number of special students,		69
Total number of students in the School of Music,		141
Department of Drawing and Painting,		153
Commercial School,		122

The Preparatory School at Morgantown,		
Fourth year, ...	48	
Third year,	43	
Second year,	47	
First year,	84	
Total number of students in Preparatory School at Morgantown,		222
Total enrollment of students at Morgantown,		1,078
Deduct for names counted more than once,		323
Total number of students at Morgantown { Women,	176	
Men,	579	
		755
Students in Preparatory School at Montgomery,		70
Total number of students in University and Preparatory Schools,		825

Summary of Students by States and Countries.

West Virginia,	668
Pennsylvania,	73
New York,	3
Ohio,	2
Maryland,	2
Virginia,	1
Michigan,	1
Washington,	1
Maine,	1
Bulgaria,	1
Asia Minor,	1
China,	1

Degrees Conferred in 1901.

Master of Arts:

William Dann Ryan, Alberta Claire McVicker,
Jeannette Eva Carter.

Bachelor of Arts:

Willia Halderman Bayles,
Jeannette Eva Carter,
Ora Octave Colebank,
John Harden Connell,
Price Winfred Cooper,
Minnie Leigh Core,
Howard Ralph Crossland,
James Thomas Dailey,
Rachel Jane Hagans Dille,
Raymond Dodson,
Harry Alpheus Garrison,
Allen Lee Hawse,
Lucian Anselm Hill,
George Henry F. Holy,
Sarah Waugh Johnson,
Frank Miller Lardin,
Ernest Daniel Lewis,
Arlington Bliss McCrum,
Frank Herbert McGregor,
Walter Howard Meyers,
Gilbert Benton Miller,
James Rogers Moreland,
Matthew Mansfield Neely,
Rebecca Lupton Norris,
Harold Frantz Rogers,
Ross Chalfant Shriver,
Benj. Franklin Shuttleworth, Jr.,
Madison Stathers,
John Dexter Vannoy,
Chauncey DeWitt Willey.

Bachelor of Science in Civil Engineering.

Dana Blackburn Burns,
Ray Vernon Hennen,
A.B., West Virginia, Univ., 1900.
Walter Forse Holland,
A.B., West Virginia Univ., 1900.

Bachelor of Arts in Law.

Charles Nathan McWhorter,
Frank Pickering Corbin.

Bachelor of Laws.

James Thomas Dailey,
Thomas Kay Laing,
A.B., Hampden-Sidney Col., 1899.
Milton Stanley Hodges,
Haymond Maxwell,
A.B., West Virginia Univ., 1900.
Silas Marion Hoff,
A.M., West Virginia Univ., 1900.
Arlington Blise McCrum,

David Harlan King,
A.B., Waynesburg College, 1898.

Walter Alexander McGlumphy,
A.B., West Virginia Univ., 1900.

Frank Herbert McGregor.

Bachelor of Agriculture.

Elbert Jones.

Diploma of Graduation in Law:

William Byrne Bowman,
Albert Gallatin Brown,
Seaton Garland Butler,
Philip Alonzo Cason,
Braden Hurst Christner,
William Lynn Cochran,
Arden Llewellyn Craig,
George Peery Crockett,
Lyman Cutright,
Ashton File, Jr.,
Elias Clark Ice,
John Lee Lehman,
Daniel Blake Leonard,
Edward Leslie Long,
Frederick Gerald Musgrave,
Thomas Edwin Pownall,
Robert L. Ramsey,
Charles Wilbur Stump,
John Holt Tiernan.
Valentine Tilden Tustin,
John Marshall Wolverton.

Diploma of Graduation in Piano.

Flora Ray Hayes,
Rosalie Boughner Howe,
Ada Virginia Houston.

INDEX.

Page.

Accredited Preparatory Schools, ... 34
Admission on Certificate, ... 47
Admission, Requirements for:
College of Agriculture, ...121
College of Arts and Sciences, ... 40
College of Engineering and Mechanic Arts, ... 95
College of Law, ...136
Commercial School, ...164
School of Military Science and Tactics, ...154, 157
Preparatory School, ...171
Advanced Standing, ...47, 96, 137
Agricultural Experiment Station, ...134
Agricultural Experiment Station Staff, ... 16
Agriculture, College of, ...119
Agriculture, Courses in, ...124
Anatomy, ...21, 51
Anglo-Saxon, ... 69
Art Courses, ... 90
Arts and Sciences, College of, ... 39
Astronomy, ...21, 77
Athletics, ... 31
Biblical Studies, ... 52
Biology, ... 53
Board of Regents, ... 8
Boarding and Rooming Places, ... 33
Botany, ...21, 44, 53, 128, 172
Buildings, ...19, 155
Cadet Corps, ...154
Central Oratorical League, ... 26
Certificates:
College of Agriculture, ...122, 131
Commercial School, ...164

Elocution, ... 64
School of Music, ...147
Chapel Exercises, ... 30
Chemistry, ...22, 45, 55, 129
Christian Associations, ... 26
Church Halls, ... 30
Civil Engineering, ...22, 106
Commercial School, ...22, 163

Courses of Instruction:

College of Agriculture, ...124
College of Arts and Sciences, ... 51
College of Engineering and Mechanic Arts, ...106
College of Law, ...140
School of Military Science and Tactics, ...156
School of Music, ...150
Commercial School, ...166
Preparatory School, ...172
Fine Arts, ... 89

Degrees:

College of Agriculture, ...121
College of Arts and Sciences, ... 48
College of Engineering and Mechanic Arts, ... 97
College of Law,.....137
Conferred in 1901, ...216

Diplomas of Graduation:

College of Law, ...138
School of Music, ...147
Discipline, ... 29
Drawing, ... 45
Economics, ... 57
Education, ... 58
Elocution, ... 64
English Language and Literature, ...41, 60, 172
Engineering and Mechanic Arts, College of,..... 92
Entomology, ...22, 128
Entrance Examinations, ... 7
Entrance Requirements, ... 40
Equipment, ...21, 93, 120, 147
Examinations for Admission to the Bar, ...142
Faculty, ... 9
Farmers' Reading Course, ...130

Fees and Expenses, ...31, 32, 89, 121, 141, 148, 164
Fine Arts, ... 89
French, ...43, 81, 173
Funds, ... 19
Geology, ...23, 66
German, ...43, 67, 174
Greek, ...42, 69, 174
Gymnasium, ... 23
History, ...45, 72, 175
Horticulture and Forestry, ...126
Italian, ... 83
Latin, ...42, 74, 176
Law, College of, ...136
Law Library, ...143
Library, University, ... 37
Library Staff, ... 16
Manual Training, ...105
Mathematics, ...43, 76, 177
Matriculation and Registration, ... 36
Mechanical Engineering,.....23, 109
Mechanic Arts, ...109, 129
Mechanics and Applied Mathematics, ...115
Military Science and Tactics, School of, ...154
Mineralogy, ... 66
Mining Engineering, ...106
Moot Courts, ...144
Music, School of, ...146
Organization of University, ... 18
Origin and Location, ... 18
Pharmacy, ... 86
Philosophy, ... 77
Physical Geography, ...44, 177
Physical Training, ...78, 156
Physics, ...24, 44, 78, 129, 177
Physiology, ...44, 52, 177
Political Science, ... 80
Preparatory School at Montgomery, ...179
Preparatory School at Morgantown, ...170
Prizes, ... 27
Rhetoric, ... 61
Romance Languages and Literatures, ... 81

Societies, ...27, 99
Sociology, ... 84
Spanish, ... 83
Special Students, ...47, 96, 137
Students Aid, ... 33
Students, Lists of, ...180
Summary, ...213
Teachers' Bureau of Information 34
Theses, ...29, 88, 98
Veterinary Science, ...127
Zoology, ...24, 44, 53, 178

5
1900-19